



## Questioned Documents Examination Test No. 15-521 Summary Report

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This test was sent to 257 participants. Each sample pack consisted of a notepad recovered from one of the suspected students (K1) and a threatening note left on the victim's car (Q1). Participants were requested to analyze the questioned note to determine if it could have originated from the recovered notepad. Data were returned from 205 participants (80% response rate) and are compiled into the following tables:

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This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

## **Manufacturer's Information**

Each sample set contained two items: Item Q1, a threatening note found on a bullied student's car windshield, and Item K1, a notepad recovered from the suspect. The note was left for a bullied student after weeks of verbal harassment from a group of several students. Participants were requested to examine the items and determine if the note could have originated from the recovered notepad.

### **SAMPLE PREPARATION-**

The notepads were reviewed for quality issues before production, and those with manufacturing defects were removed. A black chisel tip Sharpie marker was used to mark a line along the bottom edge of the notepad pages. The Q1 note author opened to the fourth page of the notepad and handprinted "I WILL KILL YOU" in capital letters, utilizing a black Papermate medium tip ballpoint pen. A list of school assignments was written by the Q1 note author, using the same pen on the third blank page following the threatening note. The note and subsequent two blank pages were removed from the notepad by creasing and tearing them along a metal straightedge ruler. The blank pages were discarded.

### **SAMPLE SET ASSEMBLY-**

After quality reviews were complete, the Q1 note was packaged into its item envelope between two pieces of chipboard and sealed with clear tape. The K1 notepad was packaged into its item envelope and sealed with clear tape. Each coordinating pair was placed into a pre-labeled sample set envelope. Following predistribution testing, each envelope was sealed with evidence tape and initialed "CTS."

### **VERIFICATION-**

Predistribution examiners confirmed that the Q1 threatening note could have originated from the K1 recovered notepad. This was supported by the following observations: fracture match between the torn edge of the Q1 note and the torn edge of one of the remnants remaining inside the K1 notepad, indented writing from the Q1 note found on one of the pages inside the K1 notepad, and similarities in ink characteristics between the Q1 note and the handwriting in the K1 notepad.

## **Summary Comments**

Each sample set consisted of two items - a threatening note left for the victim (Q1) and a notepad recovered from a suspect (K1). The victim claims that the note was left after several weeks of verbal harassment by a group of students at his school. The document Q1 originated from the notepad K1 (Refer to the Manufacturer's Information for preparation details).

For question 1, "Could the questioned note (Q1) have originated from (was once a part of) the notepad (K1) recovered from one of the suspected students?", 99% of participants reported that the questioned note originated ("A", 197 participants) or probably originated ("B", 6 participants) from the recovered notepad. One participant could not identify or eliminate if the questioned note originated from the recovered notepad ("C"). The remaining one participant reported that the questioned note did not originate from the recovered notepad ("E"); however, this participant's written conclusions (Table 3) appear to state the opposite.

A majority of participants provided the following observations to support their claim that the Q1 questioned note originated from the K1 recovered notepad: a fracture match was made between the Q1 note edge and a torn paper fragment still attached within the K1 notepad; indented writing of the text from the Q1 note was recovered on some of the pages within the K1 notepad; and a black ink mark on the Q1 note aligned with a black ink mark located along the edge of the K1 notepad. Some participants also observed that the fluorescent reactions of the paper and ink from the Q1 note and the K1 notepad were the same. Some also noted that the size and line ruling of the Q1 note was the same as the pages in the K1 notepad. Participants could make no determinations regarding the handwriting comparison between the written threat on Q1 and the written assignments found in K1, as the letters and print techniques were not comparable. Therefore, no determinations were made as to whether the author of the written assignments in K1 was also the author of the Q1 note.

# Examination Results

*Could the questioned note (Q1) have originated from (was once a part of) the notepad (K1) recovered from one of the suspected students?*

## Response Key:

- A. The questioned note ORIGINATED from the recovered notepad.
- B. The questioned note PROBABLY ORIGINATED from the recovered notepad.
- C. Cannot be IDENTIFIED or ELIMINATED.
- D. The questioned note PROBABLY DID NOT ORIGINATE from the recovered notepad.
- E. The questioned note DID NOT ORIGINATE from the recovered notepad.

TABLE 1

WebCode	Q1	WebCode	Q1	WebCode	Q1
23GPRR	A	4TGG8P	A	83HYFX	A
247VA3	A	4U96E7	B	87WBZZ	A
2B8TRK	A	699PPN	A	89YR7M	A
2VUKPV	A	6BXXW4	A	8B8J4P	A
32H4DQ	A	6CBREP	A	8E3ACM	A
3788B2	A	6D279N	A	8FLW7X	A
3BLNMR	A	6D7PVQ	A	8P3BXJ	A
3JXF2B	A	6GHV8R	A	8RV4XA	A
3QYV74	A	6LX6JA	A	8WBRFK	A
3ZLNZU	A	6R323A	A	9HMLNX	A
428R77	A	73HWRE	A	9L3UAB	A
42GUCY	A	74DGJK	A	9LK33C	A
46TYNY	A	7A22MZ	A	9T24DZ	A
4GLXH6	A	7LFYUP	A	A6QX8N	A
4L4LAA	A	7QMM8Q	A	AA6BBW	A
4MCAG8	A	7VEUPY	A	AGAKQH	A
4QC7X8	A	7VZBYA	A	AGQN9G	A
4RLVGJ	A	7ZCQKE	A	AYK2L3	A

TABLE 1

WebCode	Q1	WebCode	Q1	WebCode	Q1
B2TFT9	A	DJYLD	A	GKNKVN	A
B7L2VA	A	DJYDXU	A	GPGKAJ	A
BD4DNG	A	DM2B9M	A	GQPAPV	A
BHUH78	A	DMM4CZ	A	GV4E3A	A
BJ9CY8	A	DXHFK8	A	GWXV7E	A
BPXUDH	A	EBKNWZ	A	H32YUR	A
BVHH2F	A	ED9U2C	A	HCR8AT	A
C7GZ7U	A	EH98FH	A	HFNQBR	A
C8QMM3	A	EQG7MY	A	HRGDGM	A
CAVDUG	A	EQGDZ8	A	J2GW39	A
CAWHHJ	A	F37WRH	A	J9LGMT	A
CCPLWC	B	F3RV3F	A	JLRRW2	A
CDZ4FG	A	F3TQM7	A	JNWK7K	A
CJPTRE	B	F42EV4	A	JRZD24	A
CLRURC	A	F4XHFJ	A	K84AWM	A
CT4767	A	F8H8YW	A	KABUDV	A
CWU3FN	A	FB28B7	A	KYNVK6	A
CZDWJG	A	FDN2UR	A	KZNU4D	A
CZV78B	A	FDN4JW	A	L34P23	B
D4A8PZ	A	FJTPPE	A	L43NJB	A
DBQJ42	A	FLH4ZA	A	L7RU3L	A
DDXWPA	A	FXW26E	A	LHL92H	A
DHA4QD	A	G2TANE	A	LTVMPW	A
DHNDV8	A	GCBNRG	A	LUERHA	A

TABLE 1

WebCode	Q1	WebCode	Q1	WebCode	Q1
M2ATZU	A	R7QM6G	A	VU4M34	A
MEEB92	A	RAQGWB	A	WADVJX	B
MFRGCD	B	RFVRXX	A	WJXUXM	A
MGMZFY	A	RJDFMG	A	WNVLHZ	A
MHY8QZ	E	RJX7RV	A	WPLHTR	A
NADVP4	A	RKM6UE	A	WQYGYH	A
NBPZE9	A	RZM8R8	A	WZNT9U	A
NC6KHX	A	T2T9RW	A	X383WL	A
NERXP2	A	TCTHW9	A	X7KJWX	A
NHQE3V	A	THDE6B	A	X8GZ9U	A
NVZHGJ	A	TJ8ZWG	A	XGQP4Y	A
P8B68V	A	TKNKZ6	A	XGRKPQ	A
PB6LLP	A	TNL2BE	A	XTK44V	A
Q9F6WU	A	TUATE2	A	XZ3LFH	A
QBQ3AC	A	TZHLKD	A	Y69E8T	A
QGEKTU	A	U9LN9M	A	YEUTUV	A
QL3CUV	A	UKKC9X	A	YK4WWQ	A
QMJGCU	A	V8CWZ8	A	YMQ6XY	A
QPLJYB	A	VAUDTC	A	YN3924	A
QV9P27	A	VAUR9C	A	YWZXKT	A
R2T2FY	A	VC26TY	A	YZF8CK	A
R2TRE8	A	VF2DYU	A	Z2MKXR	A
R3CFYM	A	VLMCP3	C	Z2Q4KV	A
R4XFUW	A	VM3WTR	A	Z4BGGX	A

TABLE 1

WebCode	Q1	WebCode	Q1	WebCode	Q1
Z62GZ9	A				
Z7J9EY	A				
Z8QNJK	A				
ZBUGGP	A				
ZF6X7Y	A				
ZQRWYP	A				
ZXPN3C	A				

<b>Response Summary</b>		Total Participants: <b>205</b>
<i>Could the questioned note (Q1) have originated from (was once a part of) the notepad (K1) recovered from one of the suspected students?</i>		
Response	Q1	
A	197	
B	6	
C	1	
D	0	
E	1	

**Response Key:**

- A. The questioned note ORIGINATED from the recovered notepad.
- B. The questioned note PROBABLY ORIGINATED from the recovered notepad.
- C. Cannot be IDENTIFIED or ELIMINATED.
- D. The questioned note PROBABLY DID NOT ORIGINATE from the recovered notepad.
- E. The questioned note DID NOT ORIGINATE from the recovered notepad.

# Methods and Observations

*What methods/techniques did you utilize? What observations were made from each method/technique?*

TABLE 2

WebCode	Methods/Techniques	Observations
23GPRR	microscopic – macroscopic	It identified: Address of the fibers. Border irregularity. Pairing the preprinted (row lines)
23GPRR	video spectral comparator	nks[sic] analysis: Mail[sic] at the wavelength of 695 nm, the inks of manuscripts entered in the threat and those found in the notebook. in the spectrum of the infrared 695 nm.
247VA3	ESDA-2 Electrostatic Detector Apparatus	The document was humidified and then placed on o[sic] porous, electrically earthed platen to draw it pump[sic]. It was then covered over with a length of thin, transparent imaging film and negative electrical charge was deposited onto the upper surface of the imaging film using corona wand. The electrostatic image is developed and made visible by applying negatively-charged black toner powder to the imaging film and the ESDA image was made permanent by laminating the film with a sheet of adhesive fixing film. The indentations of the writing "I WILL KILL YOU" was recovered from the notepad page of "K1".
247VA3	VSC-400 Video Spectral Comparator	Using the flood light and side light from the VSC, the ink spot found on the note "Q1" was found to be consistent with the ink spot on the notepad "K1".
2B8TRK	Method: Note, describe, compare, conclude	Observed, described and compare general aspects and particularities element of dude and the findings are evaluated to conclude.[sic]
2B8TRK	TECNIC[sic]: Macro and microscopy	Is based on detailed observation of the particular applying different magnification using direct, oblique illumination[sic], and ground.
2VUKPV	macroscopic	There is a small black mark on the bottom of the questioned item and a black line on the bottom of the known item, both appear to be from a black marker; the mark on the questioned item is consistent in location with the location of the black line on the known item.
2VUKPV	indented writing/ESDA	Indentations from the questioned item were found on the known item.
2VUKPV	fracture match	The fracture pattern from the questioned item is consistent with a remaining piece of spiral bound paper in the known item.
32H4DQ	ESDA	The examination reveals traces of a hand written text (I WILL KILL YOU) on K1.
32H4DQ	VSC	To determine optical differences in paper and inks.
3788B2	Visual	Similar size, color, lines, line spacing etc.
3788B2	Microscopic	Tear appears to correspond, printing defects similar
3788B2	Scanner/image editing software	Printing defects similar
3788B2	Oblique Light	Knife marks from production same
3788B2	VSC	Similar fluorescent fibers no differences in ink/paper
3788B2	Indented writing	Text developed



TABLE 2

WebCode	Methods/Techniques	Observations
3BLNMR	Electrostatic Detection	The indented writing of one page of the notepad corresponds to the questioned note.
3BLNMR	Microscopic Comparision	The cutting edge of the questioned note physically matches the remain[sic] fragmental note of the notepad.
3JXF2B	ESDA Ref: 49	Indented writing "I will kill" found on the note marked as "Q1" was also found on the note pad marked as "K1".
3JXF2B	VSC 60001488 (side light)	Indented writing "I will kill" found on the note marked as "Q1" was also found on the note pad marked as "K1"
3JXF2B	VSC 6000 Ref: 1488 (floods light)	The physical match between the edge of the threatening note marked as "Q1" and the left margin inside the note pad marked as "K1" have been observed.
3JXF2B	VSC6000 Ref: 1488 (UV light)	The same paper reaction between the edge of the threatening note marked as "Q1" and the left margin inside the note pad marked as "K1" have been observed
3QYV74	Macroscopic*	The general qualities of the Q note paper agree w/ the exemplar notebook. The book contains 3 page remnants. The questioned pg, has a black ink mark @ the bottom edge. This mark was in agreement w/ similar marks that stripe across the bottom of the book.
3QYV74	Oblique Lighting	The questioned note and pages #7 & 8 in the exemplar notebook were examined for visible indentations. Pages 7 & 8 did exhibit indentations.
3QYV74	ESDA (EDD)	Exam of questioned did not reveal impressions of discernible significance. The 2 pages immediately following remnants, i.e. pages 7 & 8 bore impressions from the writing on the questioned note.
3QYV74	Infrared Energy	The questioned note paper and the paper in the notebook were examined. These papers contain fibers and particles that luminesce under IR. The Q torn edge had a few areas where a torn luminescent fiber was in placement agreement on either side of remnant 4 and the Q1 edge. There was one such area of agreement w/ Q1 and remnant 5. The ink stripe at the bottom edge border was compared between Q1 and stripe on pages 7 and 8 of the notebook exhibit the same optical reaction.
3QYV74	Stereo microscope and varying degrees of magnification on VSC	The Q1 torn edge details were examined and compared with each of the remnants in the exemplar. Although there was some general agreement between the size and slant of the tear on the Q and the E remnants, only the page remnant number 4 matched with sufficient agreement to support that they were at one time attached.
3QYV74	*Binding-spiral wire	*Subsequent to the initial evaluation of the Q1 and exemplar notebook, the spiral binding was removed in order to conduct comprehensive examinations of the notebook pages & remnant features regarding impression evidence & alternate light examinations.
3ZLNZU	Stereo Microscope[sic]	No visible result noted from lighting and magnification.
3ZLNZU	VSC 400	Revealed paper all the same and fluoresces under UV. Side lighting revealed slight indentations of writing on the same specimen. Tear marks of "Q" aligns with "K1".
3ZLNZU	Macroscopic examination	"Q" has the same mark made by a marker along the side which is consistent with all the pages on "K1"

TABLE 2

WebCode	Methods/Techniques	Observations
3ZLNZU	ESDA	Revealed indentations from previous page "I WILL KILL YOU" Humidifier used, Results all positive
428R77	VSC-6000: Magnification and Food[sic] light	Physical Match of paper fibres: Three (3) paper fragments inside note pad marked by myself "K1.1", "K1.2" and "K1.3". Paper fragment marked "K1.1" physically match with Paper fragment marked "Q1".
428R77	VSC-6000: Magnification and Food[sic] light	Physical Match of paper fibres: Three (3) paper fragments inside note pad marked by myself "K1.1", "K1.2" and "K1.3". Paper fragment marked "K1.2" does not physically match with Paper fragment marked "Q1".
428R77	VSC-6000: Magnification and Food[sic] light	Physical Match of paper fibres: Three (3) paper fragments inside note pad marked by myself "K1.1", "K1.2" and "K1.3". Paper fragment marked "K1.3" does not physically match with Paper fragment marked "Q1".
428R77	VSC-6000: Magnification and Food[sic]Light	Surface markings: Black mark at the bottom edge of paper fragment marked "Q1" is perfectly align with other black marks on other pages of the note pad.
428R77	ESDA-2: Electrostatic	Indented writing: The page after paper fragment marked "K1.3" is marked "K1.4". Deciphered words on the page marked "K1.4" are "I WILL KILL YOU".
42GUCY	Microscopic	Background print: No significant differences were observed nor significant findings made that would lead to the conclusion that the questioned note could not originate from the notepad. Physical fit of questioned note and notepad: A good physical fit of the cutting edge between the questioned note and the first cutted[sic] page of the notepad was observed.
42GUCY	Indented writing (oblique light)	In the notepad, on the page following the cutted[sic] edges, indented impressions were observed. The indented impressions were found to match with the markings on the questioned note; - the position of the indented impressions in relation to the offset printed lines equals the position of the pen written markings in relation to the offset printed lines - the shape and size of the indented impressions equals the pen written markings on the questioned note
42GUCY	Ink examination (visual and infrared)	A pen stroke on the edge of the notepad was observed. This stroke has resulted in an ink trace on each of the pages of the notepad. No significant differences were observed when comparing the ink trace on the questioned note with the ink traces on the pages of the notepad.
42GUCY	Micrometer examination	The average thickness of the questioned note is 0,06 mm, which equals the average thickness of the pages of the notepad.
42GUCY	Examination under UV and transmitted light	The look through appearance and fluorensence[sic] of the questioned note and the pages of the notepad were compared. No significant differences were observed nor significant findings made that would lead to the conclusion that the questioned note could not originate from the notepad.
46TYNY	Indented Writing Examination	Q1 and the K1 notebook were examined with oblique lighting and with an ESDA 2. The impressions recovered in the K1 notebook (pages K1-7 through K1-9), were sourced to Q1 and read: "I WILL KILL YOU".
46TYNY	Paper Comparison (VSC 6000)	The class characteristics such as color, hue, and ultraviolet responses are similar. In addition individual characteristics such as fracture pattern and paper fibers observed with IR examinations reveal that Q1 and K1-4 were at one time joined together.

TABLE 2

WebCode	Methods/Techniques	Observations
46TYNY	Ink Examination - (Micro/Macro VSC 6000)	The written entries on Q1 and K1-7 were not able to be differentiated at this level of examination.
46TYNY	Writing Examination	The questioned writing on Q1 can neither be identified, nor eliminated with the known writing on K1-7. The questioned writing and the known writing do not consist of the same uppercase/lowercase letters or letter combinations and are not comparable.
4GLXH6	Microscopy	For magnification observation of the torn paper fibres using incident light illumination. A comparison of the torn fibers found at "Q1" revealed that it align and physically match the piece of the torn page marked as "K1c", thus "Q1" was torn from "K1".
4GLXH6	Electrostatic detection with the ESDA 2	Applied to the page contained in "K1" marked as "K1a" for the detection of latent indentations. Indentations of the words "I WILL KILL YOU" was revealed on the page marked as "K1a".
4GLXH6	Side (oblique) lighting with the VSC6000	Applied for the detection of indentations, however only limited and unclear indentations were revealed. The result obtained was inconclusive.
4GLXH6	Physical fibre match comparison	Of the pieces of the torn pages found in "K1", marked by myself as "K1b"; "K1c"; "K1d" and the torn edge of "Q1". The edge of the note marked as "Q1" aligned and physically match the piece of the torn page marked as "K1c", thus "Q1" was torn from "K1".
4GLXH6	Exact match comparison	The latent indentations revealed on "K1a" were compared to the writing contained on "Q1" and revealed to be an exact match, thus the indentations observed in "K1a" were created by the handwriting produced on the note marked as "Q1".
4L4LAA	micro/macrosopic	Used the camera of the VSC6000/HS to magnify the tear pattern and paper fibers of Q1 compared to the tear pattern and paper fibers of the 3 partial pieces of paper still attached to K1
4L4LAA	indented writing	Used an ESDA 2 to process the page of K1 that contained inked writing for indented writing. The handwritten note on Q1 appears as indented writing on this page of K1.
4L4LAA	UV	Using the UV settings available on the VSC6000/HS, no differences were noted between the Q1 and K1 papers.
4L4LAA	visual	The small apparent black marker spot on the edge of Q1 is in alignment with the black markings on the edge of K1.
4L4LAA	ink comparison	Using the IR spot settings on the VSC6000/HS, no differences were noted between the ink on the Q1 note and the handwritten inked entry in K1.
4MCAG8	Video Spectral Comparator (VSC): flood light	The questioned note "Q1" physically matches with the remaining part (left margin) of the torn off note from the note pad "k1"
4MCAG8	Video Spectrum Comparator (VSC): oblique light	Indented writing of the words "I WILL" which originated from "Q1" was observed on the note pad "k1"
4MCAG8	(ESDA) electrostatic detection apparatus	Indented writing of the words "I WILL KILL YOU" which were written on the note in question "Q1" was detected on the note pad "k1"
4QC7X8	Physical fit (microscopic)	A physical fit was established between the questioned note, item Q1 and the 4th page (upper most torn fragment) of the notepad, item K1.

TABLE 2

WebCode	Methods/Techniques	Observations
4QC7X8	ESDA/Oblique Lighting	No indentations were detected on the questioned note, item Q1. No indentations were detected on the pages either side of the torn fragments and the remaining pages of the notepad, item K1.
4QC7X8	Infra red reflectance and Infra red luminescence	No differences were detected between the inks used to create the entries appearing on the questioned note, item Q1, and the notepad, item K1.
4QC7X8	IRL (VSC 6000)	A tear line match was established by visualizing fluorescent paper fiber inclusions in the questioned note, item Q1, and the 4th page (upper most torn fragment) of the notepad, item K1.
4QC7X8	Visual	A black fluid ink mark was observed on the bottom edge of the questioned document, item Q1, which was consistent with the fluid ink line running underneath all the pages of the notepad, item K1.
4RLVGJ	Microscopic examination	Microscopic examination revealed a paper tear pattern match which showed that the Q1 sheet of paper was torn from the K1 notebook.
4RLVGJ	UV examination of the papers	The Q1 sheet of paper was compared to the paper in the K1 notebook as to their response to UV optical brighteners of the paper. The Q1 and K1 papers did not reveal any differences in their responses to differing UV lights.
4RLVGJ	Infrared examination	Infrared comparisons of the preprinted ruled lines of the Q1 and K1 papers responded the same to infrared analyses.
4RLVGJ	ESDA	ESDA exam revealed that the handwritten threatening message "I WILL KILL YOU" on the Q1 piece of paper was indented onto the sheet of paper still attached in the K1 notebook bearing the visible handwriting of "3/2/15 Math: #1-25 #30-35 English: p. 16-88 worksheet".
4TGG8P	visual examination	The line structure is the same on the questioned note and the attached notepad. The questioned note consists unique page marker (black) on the bottom edge and the notepad contains the same features.
4TGG8P	optical examination (microscopy)	The questioned note absolutely paired with the first remained notepad page.
4TGG8P	optical examination (video spectral comparator)	The threatening text is visible on the notepad page which contains the other black handwritten words under oblique light (side light). The substrate of the notepad and the note is the same, they have the same optical features.
4U96E7	Magnifying Eye Peace[sic]	Is a device that magnifies details on the written paper. Of which when you apply its lights source adjacent to the paper shadows of indentation "I WILL KILL YOU" was observed.
4U96E7	VSC6000 Side lights left and right	Indentations of the note "I WILL KILL YOU" was observed and even using the composite lighting.
4U96E7	VSC6000 UV Lighting	The reaction under UV light react the same.
4U96E7	VSC6000 Flood Lighting	Physical match of paper fibres of the note pad and of one of the page structural tearing are the same.
4U96E7	VSC6000 Filters[sic] band pass	The ink dot mark at the bottom of the "I WILL KILL YOU" note is the same ink dot mark at the bottom of note pad.
699PPN	VSC	For Fracture pattern and paper fiber examination
699PPN	ESDA, side lighting	Enhance indented writing observed with side light

TABLE 2

WebCode	Methods/Techniques	Observations
699PPN	Microscopic	Examination of handwriting on note
6BXXW4	microscope	[No observations reported.]
6BXXW4	VSC 6000	[No observations reported.]
6BXXW4	ESDA2	[No observations reported.]
6CBREP	Visual Examination	Q1 has a handprinted message in black ink "I WILL KILL YOU", the document appears to be torn on the left side, could be from a notepad. K1 is a notepad with the 4th, 5th and 6th pages down all missing (torn out), the 7th page down has a handprinted message "3/2/15, Math....Worksheet"
6CBREP	Oblique Lighting	Q1 is Negative for Indented writing. K1 is positive for indented writing.
6CBREP	Leica M60	Q1 has the handprinted message pressure going through the document and being seen on the reverse side. K1 has pages 4, 5 and 6 down torn out of the notepad.
6CBREP	VSC 6000/HS	Q1 has a handprinted message that was performed with a natural flow and good pen pressure. K1 is positive for indented writing with the alignment to be very similar to the handprinted message on Q1.
6D279N	Use the method Signalético[sic]	The method comprises the following steps: Observation or inspection. Description or pointing out its features. Confrontation of concurrences or differences, and judgment of identity.
6D279N	Macroscopic.	Comparison (juxtaposition) of the edges of the three tabs contained in the notebook against the edges of the sheet edges doubt taking into account, notches, fibers of the substrate, as is the case of the lines on the sheet; among other features. Whose observation and comparison I throw the result that was taken or became part of the first tab shown in notepad.[sic]
6D279N	Light.	Fluorescencia[sic] Infrared. throwing behavior as the substrate fibers and content (stripes or rows) in general. With oblique light was seen in the second sheet of the ductus book or grooves contained in the written question. [sic]
6D279N	Inks.	By scanning at different wavelengths doubt sheet and those contained in the book, the same behavior of the content in general, as well as the willing or vertical line drawn at the bottom can be seen.[sic]
6D7PVQ	Electrost[sic] Detection Apparatus	1. Document was humidified in the humidifier after which it was placed on top of a grounded porous platen, beneath a thin sheet of Mylar (Imaging Film). The document was then charged and the image was developed using cascade. The toner particles are attracted to the imaging film corresponding to areas of localized disturbance (indentations) in the paper.
6D7PVQ	Video Spectral Comparator	Using side-light: Firstly the document was placed in a dark environment (inside the instrument). Light was propagated at angles less than forty-five degrees to the document. Indentations were visible and a photo thereof were taken.

TABLE 2

WebCode	Methods/Techniques	Observations
6GHV8R	Macroscopic examination	The size of the pages and printed lines on Q1 and K1 were measured and compared and found to [sic] of the same size. A black mark at the bottom of "Q" was identified. A similar mark appears on all the pages of the note book. The size and position of the marks on "Q" and "K1" were found to be the same.
6GHV8R	Indented writing	The notebook (K1) and document in question (Q1) were subjected to an electrostatic process using the ESDA2 and oblique lighting in order to identify and decipher any indented writing that may occur. The examination revealed no indentations of the questioned wording in the notebook (K1) and no indentations[sic] were identified on the document in question (Q1). Only indentations of the writing occurring[sic] on 4th page in the notebook was identified on subsequent pages. The evidence suggests that the page in question (Q) was removed from the note book prior to the writing in question being effected thereon.
6GHV8R	Ultraviolet (paper differences)	The notebook and document in question were subjected to an ultraviolet examination in order to determine if they react differently. It was found that both the pages in the notebook and document in question react the same when subjected to UV indicating no differences in respect of their UV characteristics.
6GHV8R	Microscopy (physical match)	The notebook revealed that at least 3 pages had been cut/torn from it (between the current 1st and 4th pages). The cut/tear marks on the remnants of pages in the notebook and that of Q1 were examined microscopically and were found to match those of the 3rd piece in K1.
6GHV8R	Ink examination (non-destructive)	An IR examination between the ink on the current 4th page of K1 and that on Q1 was conducted.
6LX6JA	VSC 6000, Flood light	A physical match was observed. "Q1" physically matches with the remaining part (left margin) of the first torn off note from the note pad "k1".
6LX6JA	VSC 6000, Oblique light-indentations	Indented writing of some of the letters ("W&I") from "Q1" was observed on "K1".
6LX6JA	ESDA2, cascade developer	Indented writing of the the[sic] words "I WILL KILL YOU" written on questioned note "Q1" was detected on the note pad "K1"
6R323A	VSC-6000, flood light	Examination of "Q1" and "K1" for physical matching, the threatening note matches with the note pad on the left margin.
6R323A	VSC-6000, side light (right)	There are indentations on the document marked "K1" indicating that "Q1" was removed from the notepad.
6R323A	VSC-6000, flood light and Alter filter	The black line on the edge of the document marked "Q1" and the black line on the edges of the document marked "K1" indicates that they were written with the same writing instrument.
6R323A	Electrostatic Detection Apparatus	There are indentations on the document marked "K1" indicating that "Q1" was removed from the notepad .t[sic]
73HWRE	Oblique Light	Some indented marks that match with others in the notepad.
73HWRE	UV/NIR Luminiscense[sic]	Paper and ink responses are identical
73HWRE	Macroscopic Comparison	The micro characteristics of the broken side in the questioned paper match with the ones of the notepad.

TABLE 2

WebCode	Methods/Techniques	Observations
74DGJK	Microscope (Initial assessment)	Determined that the writing was original. Noted print process of lines. Observed printing characteristics. Noted mark on bottom of page. Noted left torn edge of Q1.
74DGJK	Oblique light source	Examined Q1 and all K1 pages for indented writing.
74DGJK	ESDA	Examined Q1 and K1 page 7 for indented writing.
74DGJK	VSC	Compared torn edge of Q1 to K1 partial pages.
74DGJK	Ruler	Measured dimensions of Q1 and K1.
7A22MZ	Visual exam of Q1	Noted what is believed to be a printing defect located on the bottom right edge of the paper. Appears to have been cut from a notepad possibly with scissors as the cut was very neatly done. Handwriting written with black ink and in all caps.
7A22MZ	Visual exam of K1	Noted that notepad consist of numerous pages and contains remnants from 3 pages that were removed. A page that was not removed, but contained handwriting was also written in black ink.
7A22MZ	Examination of Q1 and K1 using ultraviolet light	No optical differences noted.
7A22MZ	microscopic exam of Q1 and K1	3 pages of remnants probably cut at the same time from the notepad. Noted fractures of edges of the 3 remnants and compared them to the fractures on edges of Q1. The top remnant appears to match that of Q1. There was also one fiber that appears to match.
7A22MZ	Paper thickness of Q1 and K1	Both measured .003 inches.
7A22MZ	ink exam of handwriting on Q1 and K1.4	No optical differences noted.
7A22MZ	esda examination of Q1 and K1.4	Indentations from Q1 appear on K1.4. No indentations were found on Q1.
7LFYUP	Stereoscopic microscope	[No observations reported.]
7QMM8Q	Physical	Measured thickness of Q1 sample and K1 paper by micrometer; Comparative transparencies analysis of sample Q1 and K1; specific elements in sample Q1 and K1.
7QMM8Q	Chemical	Fiber analysis from the sample of Q1 and K1 was prepared from cellulose pulp. Subsequently pulp was prepared by chemical tools.
7QMM8Q	Microscope Nikon Eclipse 80/C1 with confocall[sic] elements	Analysis edge of the paper Q1 sample and paper's fragment in notepad after tear a page from K1; microscopic observation was focused on the sample of paper Q1 and on the fragments of the edges destroyed during tearing out; Analysis of paper's structure for sample Q1 and K1.
7QMM8Q	VSC 5000 Video Spectro[sic] Comparator	Comparison of handwriting of sample Q1 and the punch holes in paper's in sample K1.
7QMM8Q	UV	Analysis of paper fluorescence for Q1 and K1.
7QMM8Q	Ramman[sic] Spectroscopy	Comparative analysis of ink of ballpoint pen used in writing sample Q1 and K1.

TABLE 2

WebCode	Methods/Techniques	Observations
7VEUPY	Oblique Light	none
7VEUPY	ESDA	Indented writing from Q1 document found on K1d document.
7VEUPY	Microscopic	Physical match between Q1 document and K1a document
7VEUPY	Microscopic	Fiber match between Q1 document and K1a document
7VEUPY	UV	K & Q documents show similar UV characteristics.
7VEUPY	Visual	Similar marks at bottom of Q & K documents
7VEUPY	VSC	IR fiber comparison, Ink comparison video microscope (microscope above) fibers matchup, inks similar
7VZBYA	microscopic/macrosopic (Leica MZ16, Leica DM ILM, Docucenter Expert Projectina)	Coincidence of the edge of paper' break line. Coincidence of black ink line on end side of the notepad and the sheet (same position)
7VZBYA	Metric measurements of paper	The same paper size (given deformation).
7VZBYA	Visual ink and paper examination (Docucenter Expert Projectina) - NIR Luminiscence[sic], reflected IR, VIS, UV	Visually, the same ink have been used for handwriting. Visually, the same ink have been used for horizontal line printing. Visually, the same ink on the lower end side of the notepad and the sheet. Paper sheet and notepad' paper are visually the same.
7VZBYA	Examination of Indented Impressions (ESDA2, Oblique VIS and NIR lighth[sic])	Indented impressions of handwritten[sic] text "I Will KILL YOU" were found on notepad sheet with text "3/2/15 Math: ... workseet[sic]".
7VZBYA	Comparison technique (Docucenter Expert Projectina)	The positive overlay of the text "I Will KILL YOU" and its indented impressions.
7ZCQKE	Macroscopic Examination	Compared the torn edge of Q1 to the partially torn pages in K1 (K1-P4 through K1-P6). Noted size and color of Q1 and pages in K1.
7ZCQKE	Microscopic Examination	Compared the torn edges of Q1 to torn edges on K1-P4 through K1-P6. Fracture match between Q1 and K1-P4 (visible fibers).
7ZCQKE	Video Spectral Comparator (VSC 6000)	Side-lighting examination of Q1 and K1 pages. Visible indentations on multiple pages in K1. Fracture match between Q1 and K1-P4 (IRR, IRL, and UV examination).
7ZCQKE	Electrostatic Detection Apparatus	Indentations were developed on K1-P7 through K1-P11. Original writing on Q1 was determined to be the source of the indentations on K1 pages.
7ZCQKE	X-ray Fluorescence Spectroscopy	Q1 and K1-P4 were chemically indistinguishable.
7ZCQKE	Thin-layer Chromatography	Q1 and K1-P4 were chemically indistinguishable.
83HYFX	VSC - oblique lighting	Indented writing on the seventh page of the notebook, matching most of the letters in the note Q1.



TABLE 2

WebCode	Methods/Techniques	Observations
83HYFX	VSC-micro/macro	Matching of the tear line between the note Q1 and the uppermost strip in the notepad K1 (page 4)
83HYFX	VSC-transmitted light	matching of the tear lines as above.
83HYFX	VSC-spot light	The ink on the note Q1 was not found to be different from the writing ink on the seventh page of the notepad K1.
83HYFX	Macroscopic	On the edge of the note Q1 there is a black ink stain in the same location as the ink stain on the edge of the notepad K1.
83HYFX	ESDA (electrostatic)	Indented writing originating in the note Q1, was found on the seventh page of the notepad K1.
87WBZZ	VSC 6000 (Flood Light)	Physical matching of Q1 to K1. When Q1 (under VSC flood light) is overlaid to K1 (under VSC side lights the words "I WILL KILL YOU" fit accurately on the indentation on K1.
87WBZZ	VSC 6000 (Side Light)	This light source revealed the indentations on K1 (The words "I WILL KILL YOU")
87WBZZ	VSC 6000 (UV Light)	UV light revealed that both Q1 and K1 papers have the same UV features as they are both UV bright.
87WBZZ	ESDA 2	This technique revealed the indentations on K1 (The words "I WILL KILL YOU") which is the same wording as on the questioned note.
89YR7M	Visual and microscopic inspection	Q1&K1: The text was written with a ball-point-pen with black ink. Shape of paper substrate and background-printing (ruling) are not distinguishable. No differences between paper-substrate of Q1 and K1 detectable by transmitted and incident light.
89YR7M	Fluorescence 366nm	Q1 & K1: highly fluorescent
89YR7M	Indented marks by ESDA	In K1 the indented text "I WILL KILL YOU" was detected on the sheet with the visible handwritten text "3/2/15..... worksheet". The position of the text on the paper-sheet as well as the whole text was congruent in all details with the text on the paper-sheet with the handwritten text on Q1.
89YR7M	Handwriting comparison	Not applicable because the text in K1 and on Q1 have only one comparable letter (k) in common.
8B8J4P	Microscopic	Examination of paper torn edges was positively matched using higher level magnification.
8B8J4P	U.V light	Analyze and imaging the fluorescence properties of paper, excited by examination with U.V light.
8B8J4P	Transmitted light	Examination with transmitted light to determine the randomness of the paper fibers, which is an identifying characteristic that makes fiber designs unique to paper sample.
8B8J4P	Oblique Light	Examination with low-angle to view evidential writing indentation
8B8J4P	ESDA	Produced an evidential record of the writing impressions which are present upon a page, resulting from previous pages of over-writing notepad recovered from one of the suspected students. The ESDA is very sensitive and may record over-writing impressions which passed through several pages.
8E3ACM	12 in ruler	Length & width of Q1 and K1 leaves

TABLE 2

WebCode	Methods/Techniques	Observations
8E3ACM	Counting	No. of leaves and stubs in K1
8E3ACM	Micrometer screw gauge	Thickness of Q1 and K1 leaves.
8E3ACM	Unaided eye with Normal, Transmitted and Oblique Light	General appearance of Q1 and K1 leaves; detection of indented writing.
8E3ACM	Low-Power Optical Microscope	Microscopic appearance of Q1 and K1 leaves and the printed lines on them. Details of torn edges of Q1 and the three stubs in K1.
8E3ACM	Electrostatic Detection	Used on fronts and backs of Q1 and two leaves of K1 to detect indentations and embossings.
8E3ACM	Preparation of photocopy transparency of Q1	To assist comparison of Q1 writing with ESDA images of indented writing and spatial relationship of each with edges of leaves.
8E3ACM	ESDA image from the back of Q1, reversed and laid onto ESDA image of front of K1 leaf.	To assist comparison of writing of Q1 with indentations and spatial relationship of each with edges of the leaf.
8FLW7X	VSC 6000-Physical[sic] Match Flood light	When analyzing "K1" and "Q1" using flood light of VSC 6000 I have observed that: markings A-E on the edges of "K1", Physically matches the markings on A-E on the edges of "Q1". The dot marked "f" on K1 physically match the dot marked "f" on "Q1".
8FLW7X	VSC 6000-Indentations Side Light	When analyzing "K1" using side light of VSC 6000 I have observed that letters "I", "W", "I" appear as indentations from the sentence "I WILL KILL".
8P3BXJ	ESDA	Impressions of handwriting on note found within pad
8P3BXJ	Visual Examination	Small black ink mark on bottom edge aligns with black ink line on bottom edge of pad.
8P3BXJ	Microscopic Examination	Physical fit between torn edge of note and torn edge of fragment of page within notepad.
8RV4XA	Initial review	Q-1: 3 ½ by 5 ½ inch lined piece of paper with hand-printing "I WILL KILL YOU". Readily observable convexities on the back of the page, created by the writing pressure. With the writing correct, the left side of the paper presents a tear pattern, while the other 3 sides are manufactory cuts/finished. A small black mark (possibly ink) on the bottom edge; approximately 2 ½ inches from the left edge. 17 evenly spaced printed lines starting 5/8 inch from the top. K-1 (notepad): Spiral notepad containing full pages similar in size (except width) and description as Q-1. The beginning of the notepad presents 3 full pages, followed by 3 partial pages (1/2 inch wide and secured to the metal spiral), then additional full pages. The 4th full page (directly after the 3 partial pages) contains writing dated 3/2/15. There are no additional partial pages or pages containing writing. A black (possibly ink) line is present on the bottom edge of the entire notepad; on all the current pages.
8RV4XA	side light	Q-1: No discernable impressions observed. K-1 (Notepad): The 4th full page (the 1st page after the 3 partial pages) contains observable impressions on hand-printing similar to that presented on Q-1.

TABLE 2

WebCode	Methods/Techniques	Observations
8RV4XA	Indented writing Electro Static Detection Apparatus	K-1 (notepad): The face of the 4th page was processed with the ESDA and partial impressions of the writing on Q-1 were developed. These impressions overlay 1:1 with the writing on Q-1 and are direct impressions. The ESDA impressions are broken where they intersect with the original ink writing on page 4; therefore, the impressions were created on page 4 prior to the writing.
8RV4XA	Microscopic Examinations (tear pattern Q-1 with partial pages in K-1)	The tear pattern and the fiber overlays are consistent between Q-1 and the 1st partial page in K-1 (notepad). The tear pattern and paper fiber overlays are different between Q-1 and the 2nd & 3rd partial pages in K-1 (notepad).
8WBRFK	Microscopic Examination	The printed lines on the note Q1 are manufactured in the same distance, colour and width of lines in comparison to the line pattern of the pages in the notepad K1. In the notepad there are three fragments of torn out former pages. The position of the black mark on the lower edge of the note (Q1) and the marks of the knife of a cutting machine on the edges of Q1 correlate with those on the pages in the notepad. Furthermore [sic] was detected, that the structure of the torn edges of the note Q1 and the upper fragment in the notepad fit together like an adapter.
8WBRFK	Examination in the NIR-/UV-range	The questioned papers (Q1 and K1) show no different or significant results in their physical characteristics of inks and paper.
8WBRFK	Casting with tangential light	The upper page in the notebook K1 with the handwriting "2/2/15[sic] Math: #1-25 #30-35 English: p. 16-88 worksheet" on it shows faint traces of characters similar to the text on Q1.
9HMLNX	VSC-oblique light	Indentations of writing "I WILL KILL YOU" appeared on the recovered notepad (K1).
9HMLNX	VSC-flood/white light	The altered portion of the notepad (K1) physically matched with the questioned note (Q1).
9HMLNX	VSC-white light	Similar mark (a dot) made by a writing instrument is observed both on the notepad (K1) and the note (Q1).
9L3UAB	ESDA2	A technique used to detect writing indentations in paper. Indentations of the writing "I WII KILL YOU" were observed on the notepad.
9L3UAB	VSC6000 (using side lights)	Indentations of the writing "I WILL KILL YOU" was observed on the notepad.
9L3UAB	VSC6000 (Flood Light)	Physical Match: The threatening note and Notepad (torn part) match under flood light.
9L3UAB	VSC6000 (UV Light)	The threatening note and Notepad (torn part) react the same.
9L3UAB	VSC6000-(Transmitte[sic] Light)	Superimposed: The writings "I WILL KILL YOU" of the threatening note fit accurately with the indentations on the notepad.
9LK33C	Method for documents examination	[No observations reported.]
9LK33C	Microscopy technique	[No observations reported.]
9LK33C	Infrared spectroscopy technique	[No observations reported.]
9LK33C	Technique of oblique intended[sic] writing	[No observations reported.]

TABLE 2

WebCode	Methods/Techniques	Observations
9LK33C	Technique of electrostatic imaging system for detecting indented writing (ESDA-LITE)	[No observations reported.]
9T24DZ	Indented Impression Examination	Q1: no decipherable indented impressions developed on the note. K1, page 4: The following decipherable, indented impressions developed on the lift from page 4 in the K1 notebook: I WILL KILL YOU
9T24DZ	Macroscopic Examination	Q1 and K1 share the following class characteristics: white paper with visible yellow fibers throughout; approximately 5 7/16" high; printed grey, horizontal lines approximately 9/32" apart; and a spot of black ink along the bottom edge of the page, approximately 1" from right edge
9T24DZ	Microscopic Examination	The torn edge on the Q1 note was compared to the torn edges on the three stubs in the K1 notebook. The stubs were labeled a, b, and c. Upon microscopic examination, it was determined that the Q1 note was at one time connected to stub labeled 'a' from K1.
A6QX8N	Visual comparison	Dimensions, horizontal lines of K1 and Q1 are the same. The black stain (mark) on the bottom of Q1 corresponds to the stains (marks) on K1 (bottom).
A6QX8N	Microscopic	Similar paper fibers (some yellow) on Q1 and K1. Small torn part of paper in K1 (first of all three) corresponds to the torn part of Q1.
A6QX8N	UV – 365nm, 312nm, 254nm	No differences in paper between Q1 and K1.
A6QX8N	IR – luminescence	No differences in luminescence of ink on Q1 and K1.
A6QX8N	Indented writing	Oblique and electrostatic (ESDA). On the paper with written text in the notepad there is indented writing of the text from Q1.
AA6BBW	VSC-6000 Ref:1200	Magnification and sidelight for indentations, indentations were not clear under VSC
AA6BBW	VSC-6000 Ref:1200	Spot light for physical match at the edge of the paper which was evident on the left margin.
AA6BBW	ESDA Ref:03	Indentations were evident after using the ESDA (electrostatic deflection[sic] apparatus) written words "I WILL KILL YOU" were evident on the plain note pad. Therefore writing found on the threatening note is also found on the note pad.
AGAKQH	Microscopic examination of writing on Q1 and K1-4	original black ink; appears to be ballpen ink
AGAKQH	VSC examination	inks on Q1 and K1-4 have similar reflected IR and IR absorbance characteristics; no latent luminescent writing on paper
AGAKQH	UV examination of paper	all sheets examined have bluish white mottled appearance
AGAKQH	Physical examination of notebook	pages measure 3 31/32" x 5 13/32", each page/stub has 17 holes and 17 ruled lines; page count is 37 pages in the first two dividers, 38 in each of the others; 150 pages (full or partial) present; black fluid ink line across bottom of pages about 1" from right edge
AGAKQH	ESDA indented writing	Q1 writing left indentations[sic] on K1-4 and K1-5 (latter faint); K1-4 writing left indentations on K1-5 and K1-6 (latter faint)

TABLE 2

WebCode	Methods/Techniques	Observations
AGAKQH	Fracture match visual	Q1 and K1-1 appear to match; Q1 and K1-2, K1-3 do not appear to match
AGAKQH	Fracture match using Keyence digital microscope	Q1 and K1-1 are a match by virtue of shape of tear, match of ruled lines and match of several fibers from one side to the other
AGQN9G	ESDA	Positive. Indented writing of item Q1 note found in item K1 notepad.
AGQN9G	Torn edge examination (microscopic & VSC)	Positive. Item Q1 note at one time attached to item K1 page 4 based on fracture pattern and fiber crossings.
AGQN9G	Physicals (macroscopic)	Item Q1 and item K1 consistent in size and design. Black ink mark on item Q1 consistent (location and color) with ink line marking on page edges of item K1.
AYK2L3	Light sources, i.e. Side lighting and Flood light	Indented impression that look like a shadowgraph reading "I WILL KILL YOU" was observed from notepad "K1".
AYK2L3	Electrostatic Detection Apparatus	Indentation text reading "I WILL KILL YOU" was deciphered from notepad "K1"
AYK2L3	Handwriting comparison	Handwriting on the threatening note "Q1" has the similar individual handwriting characteristics and are identical as that of indentation text deciphered from the notepad "K1".
AYK2L3	Visual Examination	Three pages were cut off from notepad "Q1 [sic]".
AYK2L3	Physical match of papers	Edge to edge realignment between threatening note "Q1" and remaining piece of cut page revealed that the fractures from note "Q1" matches the fractures from notepad "K1" piece of paper. The surface marking on the threatening note "Q1" and one of the remaining piece of cut page matches the surface marking on the notepad "K1" piece of paper.
AYK2L3	Magnification	A fine details of the sentence "I WILL KILL YOU" was observed from "Q1" and indented impression deciphered from notepad "K1".
B2TFT9	Visual Spectral Comparator (VSC) - flood light	There is a physical match between "item Q1" and one of the pages removed from "item K1".
B2TFT9	Visual spectral Comparator (VSC) - side light	Indentations/impressions writing on 'item K1' that shows 'item Q1' was written on top of 'item K1' when removed.
B2TFT9	Electrostatic Detection Apparatus (ESDA)	The indentation writing "I WILL KILL YOU" appears on 'item K1' which is the same as the wording on the threatening note 'item Q1'
B7L2VA	Macroscopic and microscopic	With transmitted light, UV light, and different filters it was observed the same transparency and opacity in the threatening note's paper (Q1) and the recovered notepa's[sic] paper (K1). There is compatibility between the fibers and the lines of the threatening note's paper (Q1) and the recovered notepad's paper (K1).
B7L2VA	Comparison techniques	It was observed a perfect match in the left border of the threatening note's paper (Q1) and the right border of the first paper residue of the recovered notepad (K1).

TABLE 2

WebCode	Methods/Techniques	Observations
BD4DNG	Indented writing (electrostatic)	Using Electrostatic Detection Apparatus (ESDA) - Indented impression of handwriting reading "I WILL KILL YOU" was observed on the handwritten page of the notepad (K1). No indented impression of handwriting was observed on the threatening note (Q1).
BD4DNG	Comparison techniques	Comparison techniques using Video Spectral Comparator (VSC 6000/HR) - the ruled lines on the page of the threatening note (Q1) in line and matched with the ruled lines of the three torn pages and the untorn pages of the notepad (K1).
BD4DNG	Microscopic (comparison)	Comparison techniques using Video Camera Microscope (VCM/HR) - the perforated irregular torn edges page of the threatening note (Q1) mechanically fit with the perforated irregular torn edges page of the 1st torn page of the notepad (K1).
BD4DNG	Instrumental analysis (measurement)	Instrumental analysis using micrometer screw gauge - the page thickness of the threatening note (Q1) was approximately of the same thickness with the pages of the notepad (K1).
BD4DNG	Physical examination (visual)	Both the threatening note (Q1) and the notepad (K1) have inked marked[sic] at the bottom base of the pages.
BHUH78	VSC 6000 - Flood Light	Physical match with first torn page in note pad and note. No match found with other two torn pages in note pad.
BHUH78	ESDA 2 - Electrostatic detection	Indented writing " I WILL KILL YOU" that originated from the note appears on the first page after the torn pages in the note pad.
BJ9CY8	ESDA 2	An instrument that renders the intended writing visible and provides a record of the writing, the writing "I WILL KILL YOU" appears visible on the notepad marked "K1".
BJ9CY8	VSC6000-side light	In which a light source is passed over the sheet of paper at an oblique angle, the writing "I WILL KILL YOU" is visible on the notepad marked "K1".
BJ9CY8	VSC6000-side light (r)	The two items marked "K1" and "Q1" were superimposed and the writings "I WILL KILL YOU" match.
BJ9CY8	VSC6000-flood light	Physical match: The item marked "Q1" were physically match with the torn part of the item marked "K1"
BJ9CY8	VSC6000 UV- light	UV reaction of K1 (torn part) and Q1 physical match: The paper of item marked "K1" reacts the same with the paper of the torn part of item marked "Q1".
BPXUDH	Stereomicroscope	Paper examination: paper density and fiber types (comparison Q1+K1). Paper edges for torn pattern (Q1 + 3 remaining torn pages in K1). Printing process of lines (Q1+K1).
BPXUDH	Video spectral comparator / Luminescence	Fracture match of edges and fibers examination
BPXUDH	Video spectral comparator / Side Lighting	Indentations
BPXUDH	Photoshop	Indentation overlay. Fracture match of edges.
BPXUDH	Ruler	Page dimensions. Line spacing / margin. Distance of black ink spot at bottom of pages from the right margin (comparison Q1+K1).

TABLE 2

WebCode	Methods/Techniques	Observations
BVHH2F	direct observation	Leaf certainly is similar in size and design to the leaves of the book. , presents a mechanical, and irregular cut on the left side, the book presents three tabs with irregular cuts. Presnta sheet doubt a mark of ink on the bottom right, the leaves of the book presented in the same area a parallel line drawn in ink. [sic]
BVHH2F	microscopic observation	The mechanical cutting irregular presents the left side of the page certainly coincides with the cutting of the tabs presented by the book, (just above). [sic]
BVHH2F	grazing lighting	Using the technique of grazing light, seen in a handwritten sheet of notebook, some deep strokes that match the structure of the word (i will), which is corroborated by observing the sheet doubt and handwritten notepad sheet by overlapping technique .
C7GZ7U	Stereomicroscope LEICA MZ95	Examined paper fibers using the stereomicroscope. Found multiple paper fibers that crossed from the note to the perforated edges.
C7GZ7U	VSC 6000 HS	Examined paper fibers under IR Luminescence.
C7GZ7U	Visual	Visual reconstruction of the questioned document to the known notepad.
C7GZ7U	Electrostatic ESDA 2	Questioned entry was found indented on the 4th intact page from the known notepad.
C8QMM3	Magnification and Flood light	Edges on the left margin of the note matches with those of the notepad on the right.
C8QMM3	Magnification and Oblique light	Indentations of the words I WILL KILL YOU were observed on some of the pages of the notepad.
C8QMM3	ESDA	Indentations of the words I WILL KILL YOU were observed on some of the pages of the notepad.
CAVDUG	Macroscopic	Same colour of paper between Q1 and K1. Paper size: Same height between that of Q1 and K1. Black mark at the bottom right of Q1 was also found at that of the K1 (in which one single black stroke written from the first page down to its back hard cover of K1).
CAVDUG	Indented writing (ESDA & oblique light)	No indented writings detected on the paper beneath the three torn pages in K1.
CAVDUG	Microscopic	Physical fit of torn edges between the first torn paper in K1 (the fourth page in K1) and Q1. No physical fit of torn edges between the second and third torn papers (the fifth and sixth pages in K1) and Q1. The same paper defect found on Q1 and K1 on their right margins.
CAVDUG	VSC5000	Under transmitted light: Physical fit of torn edges between the first torn paper in K1 (fourth page in K1) and Q1. The printed lines on both sides of Q1 and K1 matched at their torn edges.
CAVDUG	VSC5000	Under UV light: Both Q1 and K1 (paper) fluoresced but their inks did not.
CAVDUG	VSC5000	Under IR luminescence (spot lamp): Luminescent paper fibers that matched across the torn edges between the first torn paper in K1 (fourth page in K1) and Q1 have been found on several places along the torn/cut.
CAWHHJ	ESDA	The questioned note (Q1) was written while in the K1 notepad.

TABLE 2

WebCode	Methods/Techniques	Observations
CAWHHJ	Video Spectral Comparator	Magnification on normal light shows gross tear pattern match to uppermost of the three remaining stubs in the notebook. Use if[sic] IR Luminescence shows many luminescent fibers in the paper, some of which have been transected when the Q1 page was removed from the book.
CCPLWC	microscope/VSC - zoom	similar tear pattern along left hand side of Q1 and three 'stubs' in the notepad
CCPLWC	visual/VSC	Ink mark on right of bottom edge aligns with marking on notepad pages and no difference in the ink
CCPLWC	Visual	Q1 plus 'stub' same size and type of paper as in notepad
CDZ4FG	Stereomicroscope, hand lens	The torn edge on the left side of Q1 aligns with the right torn edge of the top partial piece of notepaper, K1, (labeled 4 in the sequence of pages in the notebook.)
CDZ4FG	UV, Transmitted Light Box, White light, Oblique light	Under UV long and short wave light, Q1 and K1 showed similar fluorescence. On the transmitted light box, similar opacity was noted in Q1 and K1. Under white light, a slight vertical crease was noted on right side of the notepapers Q1 and K1. Oblique light did not yield viable results.
CDZ4FG	Ruler, Fowler Euro-Caliper IV Micrometer	Q1 and K1 measures the same in length and width, space between horizontal lines, headers, footers, paper thickness, location of black ink mark on the bottom of the paper.
CDZ4FG	Electrostatic Detection Apparatus (ESDA)	K1 Page 7 (numbered in the sequence of pages in the notebook), containing hand printing, was processed with positive results. Words became visualized that were consistent with words on Q1.
CJPTRE	VSC6000	oblique light
CJPTRE	microscope	magnifying, cutting plane comparison
CLRURC	Mechanical Fitting of Torn Pages	The threatening note (Q1) originated from the notepad (K1). Specifically, the notepad contains three intact pages leading into the notepad, followed by three removed pages, followed by another intact page with numerals and hand printing: "3/2/15 Math: #1-25..." The three removed pages appear to have been removed by means of a straight edge placed against the pages and torn (as opposed to being cut with a sharp-edged instrument). Of the three removed pages, left side page remnants remain affixed the notepad's spiral wire binding. Q1 was once part of the topmost page remnant. Both that remnant and Q1 mechanically fit precisely.
CLRURC	Stereoscopic Magnification	The exactness of the mechanical fit was readily apparent by means of stereoscopic magnification.
CLRURC	Oblique Lighting & Electrostatic Imaging System	The hand printing on Q1, "I WILL KILL YOU" is indented onto the intact page with numerals and hand printing (cf. above), which following the three removed pages. Furthermore, by means of oblique lighting and electrostatic imaging, latent writing indentations from Q1 are also visible on the intact page with numerals and hand printing, and the two pages below that page.
CT4767	Microscopic Exam	Inks, paper, guillotine blade marks consistent between Q1 and K1
CT4767	VSC (IRL, IRR)	Ink entries, ink mark along edge consistent. Luminescent paper fibers matched between Q1 and K1, paper consistent between Q1 & K1.



TABLE 2

WebCode	Methods/Techniques	Observations
CT4767	UV Exam	Paper consistent between Q1 & K1.
CT4767	ESDA	Indentations of writing on Q1 found on a page of K1.
CT4767	Macroscopic Exam	Physical characteristics of Q1 consistent with pages of K1.
CT4767	Torn edge exam	Q1 consistent with being torn out using a straight edge, Q1 matched to pattern of tear on a remnant in K1.
CT4767	Oblique Light	Visible[sic] indentations from Q1 on a page of K1
CT4767	Handwriting comparison	No conclusion, handwriting is not sufficiently comparable.
CWU3FN	microscopic/macroscopic	Similarities between the Q1 sheet and the sheets in the K1 notepad; Similarities between the ink on Q1 and the ink on one of the sheets in the K1 notepad; similarities between a dark extraneous mark along the lower edge of Q1 and on the sheets in the K1 notepad; Similarities between the torn edge of Q1 and the torn edge of one of the tabs in the K1 notepad; presence of yellowish paper fibers that bridged the torn edge of Q1 with that same torn tab in the Item K1 notepad.
CWU3FN	indented writing (oblique light and ESDA)	Recovered indentations of the Q1 writing from two sheets in the K1 notepad.
CWU3FN	instrumental (VSC-6000)	Located numerous luminescent paper fibers that bridged the torn edges of Q1 and that same torn tab in the K1 notepad; checked reactions of the ink on Q1 against the ink on one of the sheets from K1 and found no differences.
CZDWJG	Crime-Lite 80L	Side light illumination to observe torn edge detail.
CZDWJG	VSC 6000	Magnification and contrast enhancement to observe torn edge detail.
CZDWJG	Light box	Background transmitted light to observe torn edge detail.
CZDWJG	ESDA	Indented writing observed using the Electrostatic Detection Apparatus.
CZV78B	Visual/Microscopic	Q1 was written with black ball point pen. K1g was written with black ball point pen. Q1 was written with medium speed and pressure. K1g was written with medium speed and pressure.
CZV78B	Digital Imaging	Imaged in Foray Q1, K1, ESDA lift K1g front, and Physical Match (K1d to Q1).
CZV78B	Indented Writing Visual	Visually Examined Q1 (front and back) and K1a-g (front and back) for indented writing impressions using oblique/side lighting. No visual impressions of value were found.
CZV78B	Indented writing/ESDA (Electrosatic[sic] Detection Apparatus)	Processed Q1 (front and back) for indented writing impressions utilizing the ESDA. (+) no value. Processed K1a-c (front and back) for indented writing impressions utilizing the ESDA. (+) no value. Processed K1g-i (front and back) for indented writing impressions utilizing the ESDA. K1g-h (+) of value (front and back). Processed K1i (front and back) for indented writing impressions utilizing the ESDA. K1g-h (+) no value.

TABLE 2

WebCode	Methods/Techniques	Observations
CZV78B	Visual/Microscopic	Examined the questioned fractured item (Q1) and known fractured items (K1d-f). Compared Q1 to K1d-f to determine if there is congruity of class/individual characteristics between Q1 and K1d-f. Evaluated and found class/individual characteristics between Q1 and K1d. *white lined small note pad paper *realignment of lines *realignment of tear pattern *interfitting of fibers
CZV78B	Database Search	Q1 was searched through the current Criminal Letter Database of the Police Laboratory's Questioned Documents Unit. Q1 can not be associated to any previously submitted case.
D4A8PZ	ESDA	On the handwritten page of the notepad we found the indentation of the writing: «I WILL KILL YOU» figuring on Q1. This indentation found on this page is perfectly superimposable to the writing of Q1
D4A8PZ	Keyence Macro	Macroscopic and microscopic observations let us to find two different physical matches between the first detached page of Q-1 and the written page of the notepad; 1. The same cutting irregularities along the common vertical axis; 2. At about 42 to 45 mm from the bottom left side two same yellow fibres
DBQJ42	Indented writing (electrostatic)	Observations made when electrostatically examining the first page, after the remains of torn out pages, in the notebook K1: Indented writing corresponding to the writing on the note Q1. Corresponding size, shape and position of the text as well as corresponding specific details.
DBQJ42	Comparison (microscopic)	Observations made when comparing the note Q1 with the first of the three remains of torn out pages in the notebook K1: Matching general look and "shape" of the torn edges. - Broken paper fibres matching across the tear.
DBQJ42	Comparison (infrared)	Observations made when comparing the note Q1 with the first of the three remains of torn out pages in the notebook K1: Broken paper fibres matching across the tear, even more visible using infrared.
DBQJ42	Comparison (microscopic)	Observations made when comparing the note Q1 with the first page, after the remains of torn out pages, in the notebook K1: Ink from black line drawn across the bottom of the notebook K1 corresponding in size and position.
DDXWPA	Visual and microscopic exam using the unaided eye and the stereo microscope. Observations are as follows:	Q-1: Lined paper; Top edge of page measures ~3, 7/16th inches, bottom edge ~ 3, 5/16th inches; Left and right edges measure ~ 5 1/2 inches; torn left edge; Lines are a grayish black color: 17 total, printed on the front and back; Top margin measures ~ 3/4 inch; Interline spacing measures ~ 1/4 inches; Bears hand printed "I WILL KILL YOU" in black ball point pen ink; Black aqueous ink mark on bottom edge at ~ 1, 2/16th inches from left edge. K-1: Notebook measures ~ 4 1/2 x 5 1/2 inches; Cover is greenish blue plastic (textured front side); Divided into 4 sections separated by clear colored plastic pages with tabbed edges (red, blue, blue); cardboard backing; black wire spiral binding; Lines are grayish black in color: 17 total, printed on the front and back; interline spacing is ~1/4 inch; top margin measure ~3/4 inch; individual pages measure ~ 4 x 5 1/2 inches; Black aqueous ink line traversing the bottom edge of the notebook pages at ~ 1, 2/16 inches from left edge; 4th, 5th and 6th pages from the front are torn out and missing; 7th page contains hand printing in black ball point pen ink; Examined the remaining pages of K1 notebook. No additional writing was found.

TABLE 2

WebCode	Methods/Techniques	Observations
DDXWPA	HW Comparison	A forensic comparative examination of the questioned hand printing on Exhibit Q1 and the hand printing appearing on page 6 of K1 was inconclusive. Not comparable in text or style. Q1 is all upper case letters while K1 contains predominantly lower case letters. In addition the letters in the Q are not repeated in the K.
DDXWPA	Indented writing exam	Using the Crime-lite instrument and side lighting, indented writing was observed on the 7th page of the notebook that corresponds to the Q1 text. Using scissors, I removed the 7th page of the notebook bearing the indentations in order to facilitate an ESDA2 exam. Marked the edge of the portion of the paper still attached to the notebook with my initials and the date and marked the removed page as Exhibit K1A for identification. Using the ESDA2 instrument, I examined exhibits Q1 and K1A for indented writing. No indented writing was developed on Q1 but indented writing was developed on the front and back of exhibit K1A. Lifts were made of the developed indented writing. The writing was more visible from the lift of the back. It most closely resembles "I WILL KILL YOU" and overlays with the writing on Q1 making evident that Q1 was on top of K1A when the writing was made. The functionality of the ESDA 2 was verified using a verification test strip each time an item of evidence was processed. See attached image. [No images attached].
DDXWPA	UV and IR exam	Using the VSC6000, I examined both exhibits under UV light. No evidence of value was observed. The paper fluoresced similarly for Q1 and K1A. Using the VSC6000, I examined both exhibits using the IR band pass filters and spot fluorescence. The ink appearing on the exhibits could not be differentiated.
DDXWPA	Fracture match of torn edges of paper	Using the VSC6000, I examined under magnification the torn right edges of the 3 remnants of paper from K1 (pages 4, 5, and 6) and compared them to the torn left edge of Q1. The pattern of the torn edge of Q1 was matched to the torn edge of the 4th page of the notebook, 1st of the 3 torn pages. See attached image. [No images attached].
DHA4QD	Initial Assessment (Lighting, microscope)	Physicals taken and gross observations made using ruler, lighting, and macroscopic observation. Assessment of Handwriting (original/freely prepared) made using lighting and magnification.
DHA4QD	Indented Writing (ESDA, Side-lighting)	Observations of indented writing were first made using side-lighting and then ESDA was conducted on pages which were logical to have indented writing present based on tear locations of pages in K1 and possible indentations observed with side-lighting.
DHA4QD	Torn/Cut Edge Examinations	A torn edge comparison was conducted using side-by-side comparison (ACE-V methodology) of the edges using fracture patterns.
DHNDV8	Oblique Lighting Examination	No visible indentations, similar to text on question note, Q1, seen on pages directly below (pages 7 - 17), in specimen notepad, K1.
DHNDV8	ESDA	Indentations, similar to text on questioned note, Q1, "I WILL KILL YOU" is seen on pages directly below (pages 7 - 9), in specimen notepad, K1.
DHNDV8	Microscopic Examination (matching torn edges)	Dimensions of questioned note, Q1, similar to dimensions of paper found in specimen notepad K1. Torn edge of questioned note, Q1, matched up with first torn edge (page 4), in specimen notepad K1. Torn edge of questioned note, Q1, did not matched[sic] up with the second and third torn edges (pages 5 & 6) in specimen notepad, K1.

TABLE 2

WebCode	Methods/Techniques	Observations
DJJYLD	VSC6000	oblique light
DJJYLD	ESDA(electrostatic detection apparatus)	Indentations(letter impression) indented impression
DJJYLD	microscope	magnifying
DJYDXU	Microscopic/macrosopic examination	Fracture match between Exhibit 1 (page 4) and Exhibit 2 (questioned note)
DJYDXU	Microscopic/macrosopic examination	Ink line approx. 2.5 cm from the bottom-right edge of the pages within Exhibit 1. Similar mark observed on the bottom edge of Exhibit 2 approx. 2.5 cm from the right edge
DJYDXU	Indented writing	Indentations originating from Exhibit 2 (questioned noted[sic]) developed on Exhibit 1 (page 7).
DM2B9M	Steriomicroscope[sic] Olympus SZX12	Microscopic examinations revealed: 1. The Item 1 note book bears small black dots on all the backsides of the pages above the manufacturer's printed lines (including the partial pages 4, 5 and 6). 2. The Item 2 note page bears small black dots on the backside of the page, above the manufacturer's printed lines. 3. Microscopic examinations of the black dots on the Item 1 notebook pages failed to reveal any set patterns. The black dots varied in number and placement from line to line and also within lines. 4. Because no set patterns could be found in the black dots within Item 1 or Item 2, there is no conclusion if the black dots located on the backsides of the partial pages 4, 5 and 6 of Item 1 do or do not match the black dots located on the back side of Item 2. Handwriting Comparisons: 1. The known writing produced in black ball point ink on page 7 of Item 1 appears to have been produced naturally. 2. The questioned writing produced in black ball point ink on Item 2 is produced in all capital letters. The writing appears fluent however, there is no conclusion if the writing was or was not produced naturally. 3. Handwriting comparisons will not be conducted because all the known writing is produced in upper and lower case letters and all the questioned writing is produced in all upper case letters. In addition, there is not any similar words or letter combinations between the writings on Item 1 and Item 2.

TABLE 2

WebCode	Methods/Techniques	Observations
DM2B9M	Foster + Freeman video spectral comparator 6000 (VSC6000)	<p>Alternate Light Source and Microscopic Comparisons: (VSC6000 Examinations) All Control +/-Okay 5.13.15 through 5.19.15</p> <ol style="list-style-type: none"> <li>1. The paper tear comparison between the torn left edge of Item 2 and the torn right edge of partial page 4 of Item 1 revealed several points in common between the two edges (part of the fracture match).</li> <li>2. After the partial page 4 of Item 1 was matched to the page submitted as Item 2, the two paper fragments measure ~10.2 by 13.9 cm together, which is the same size of the pages within the known Item 1 spiral notebook (part of the fracture match).</li> <li>3. The paper fiber comparisons between the left torn edge of Item 2 and the right torn edge of partial page 4 of Item 1 revealed several partial fibers that were once single fibers between the two edges (part of the fracture match).</li> <li>4. Black felt ink marks on pages 1, 2, 3, 7, 8, and 9 of Item 1 and Item 2 (Q) were examined as follows: <ol style="list-style-type: none"> <li>a. The location of black felt ink marks on the whole pages 1, 2, 3, 7, 8, and 9 of Item 1 (K) and the page submitted as Item 2 (Q) were measured from each of their right lower corners. All black felt ink marks are ~2.6 cm from the right lower corner of each of the pages.</li> <li>b. The black felt ink marks on the pages 1, 2, 3, 7, 8, and 9 of Item 1 (K) and the page submitted as Item 2 (Q) were examined microscopically and using the VSC6000. Examinations of the black felt ink marks failed to reveal any differences between all of the marks on the pages of Item 1 and the mark on Item 2.</li> </ol> </li> <li>5. Paper comparisons between Item 2 and the page labeled 7 of Item 1 failed to reveal any differences using microscopic examinations and all the light source and filter combinations available on the VSC6000.</li> </ol>
DM2B9M	Foster + Freeman Electrostatic Detection Apparatus (ESDA)	<p>Electrostatic Detection Apparatus (ESDA) - 5.13.15 Control +/-okay Cascade Development Used Rh+ 49.1% S/N #70156</p> <ol style="list-style-type: none"> <li>1. Examinations of pages 8 and 9 of the Item 1 spiral notebook revealed indented impressions that were caused when the writing was produced on the notebook page submitted as Item 2 that reads I WILL KILL YOU.</li> <li>2. Examinations of page 7 of Item 1 and Item 2 failed to reveal[sic] indented impressions. Note - faint impressions were visualized on page 7 of Item 1 during side light examinations. A second ESDA examination of page 7 was conducted the next day and it failed to reveal any indented impressions.</li> </ol> <p>5.14.15 Control +/-okay Cascade Development Used Rh+ 48.3% S/N #70156 Used conclusions from first day examinations.</p>
DM2B9M	Leeds/Fostec goose neck lighting apparatus	<p>Indented Impression Examinations / Side-light Examinations: Sidelight Examinations - 5.8.15</p> <ol style="list-style-type: none"> <li>1. Examinations of the pages 7, 8, and 9 of the Item 1 spiral notebook revealed very faint indented impressions that were caused when the writing was produced on the notebook page submitted as Item 2 that reads I WILL KILL YOU.</li> <li>2. Examinations of the pages 8 and 9 of the Item 1 spiral notebook revealed indented impressions that were caused when the writing was produced on page 7 of the Item 1 spiral notebook.</li> <li>3. Pages 1, 2, and 3 in the Item 1 spiral notebook failed to reveal any indented impressions.</li> <li>4. Examinations of Item 2 failed to reveal any indented impressions.</li> </ol>

TABLE 2

WebCode	Methods/Techniques	Observations
DM2B9M	Case notes / Evidence description	Case notes / Evidence description One red tape sealed manila envelope containing two smaller clear taped manila envelopes containing: KNOWN EVIDENCE: Evidence Description: Item 1 (K): One red tape sealed manila envelope containing: one small spiral notebook ~11.4 by 13.9 cm with black lined paper, a green plastic cover, a cardboard back and red, green and blue plastic tab dividers. Inside, the first three pages are whole pages and were labeled 1, 2, and 3 by [Analyst]. The next three pages are partial pages left when the pages were torn out. These partial pages were labeled 4, 5 and 6 by [Analyst]. The remaining pages in the notebook are complete pages. [Analyst] only labeled the next three pages after the three partial pages. These three whole pages were labeled 7, 8, and 9 by [Analyst]. The partial pages 4, 5, and 6 were measured and ranged from ~1.3 to 1.4 (torn edges) by 13.9 cm). The complete pages labeled 1, 2, 3, 7, 8, and 9 were measure and were ~10.2 by 13.9 cm. The three partial pages present appear they have been removed in a similar manner at the same time i.e. there is a line crease present on the partial page labeled page 4 that appear to be from a straight edge and the partial pages labeled pages 5 and 6 were stuck together. There is writing produced in black ball point ink present on the 7th page in the notebook. The notebook pages also have a black ink mark running down the side of the pages in the lower right corner (see picture in case file) ~ 2.6 cm in from the right edge. The mark on the first page is minimal and the mark on the second page is only visible using the microscope on the back side of the page. The black ink mark is very dark and very visible through the rest of the book. QUESTIONED EVIDENCE: Evidence Description: Item 2 (Q): One rts manila envelope containing: one piece of black lined note paper that measures ~8.9 by 13.9 cm and bears a black felt ink mark ~ 2.6 cm from the right lower corner. The note bears the message I WILL KILL YOU in black ball point ink. The left edge of the paper has an uneven edge like it had been torn.
DMM4CZ	Video Spectral Comparator - Side Lights	Impressions writing - on notepad (K1)
DMM4CZ	Video Spectral Comparator - Flood Light	Physical match - Note (Q1) and Notepad (K1) same texture
DMM4CZ	Electrostatic Detection Apparatus (ESDA)	Indentations writing (K1) - I WILL KILL YOU
DXHFK8	VSC 6000 - Flood Light	1. Physical match between the notebook and the questioned note
DXHFK8	Side light	1. Indentations on the notebook
DXHFK8	ESDA	1. Indentations on the notebook
EBKNWZ	Indented writing - oblique	Indentations on page 7 of K1
EBKNWZ	Indented writing - ESDA	K1 Page 7 indentations "I WILL KILL YOU" overlay writing on Q1.
EBKNWZ	Macroscopic	Similarities in edge marks (guillotine & black marked line) on Q1 & K1.
EBKNWZ	Macroscopic	Similarities in paper colour & size, ruled line spacing, colour & width on Q1 and K1.
EBKNWZ	Ink Exam - VSC RIR & IRL	K1 ink similar reaction, Q1 ink similar reaction, cannot compare Q1 to K1.

TABLE 2

WebCode	Methods/Techniques	Observations
EBKNWZ	Paper Exam - VSC UV	K1 & Q1 similar reactions.
EBKNWZ	Microscopic & Transmitted light	Q1 & K1 Page 4 similarities in torn edge profile, Q1 & K1 Pages 5 & 6 differences in torn edge profile
ED9U2C	METHOD: SEÑALETICO[sic]: Observation	Initially[sic] the incriminating document is the one that has taken NOTE: I WILL KILL YOU, natural light was used for observation. Then Notepad is observed, which contains three (3) pieces of paper attached to the ring.
ED9U2C	Indication and compare the characters	There are compared and arranged individually three (3) chunks of paper adhered to the passbook of notes, opposite to the leaf that contains the Note: I WILL KILL YOU, in the VSC 6000. [sic]
ED9U2C	Judgment distinctive and identity.	It differs: Direction of the fibers of the paper. - type of court and his characteristics. - physical Particularities of the substrate. - Continuity of the lines pre-impresas.-Thickness of the pre-printed lines. [sic]
ED9U2C	INSTRUMENTAL: Magnifier 10 X	[No observations reported.]
ED9U2C	VSC 6000	[No observations reported.]
EH98FH	Indented writing - oblique lighting	Application of the oblique lighting allowed to show indented impressions of handwriting on the fourth existing page of notepad (Item K1).
EH98FH	Indented writing - electrostatic (ESDA)	ESDA was used to visualize indentations of handwriting on the surface of the fourth page of the notepad (Item K1). The visualized indented impressions were identical with handwriting "I WILL KILL YOU" which is visible on the threatening note (Item Q1).
EH98FH	Paper - microscopic/macrosopic examination	The left edge of the threatening note (Item Q1) matches the edge of the first fragment of paper left in the notepad (Item K1). Black point on the bottom edge of the threatening note is in the same position as the black line marked on the bottom of all the pages of the notepad.
EQG7MY	Microscopic	Tear match comparison, printing and pen type identification
EQG7MY	Macroscopic	Measurement of format of items including sheet and line spacing, and orientation of black mark located on bottom of sheet.
EQG7MY	Fluorescence (IRL)	Paper fibre examination of fluorescent fibres in the paper to determine whether a tear match could be observed
EQG7MY	Indented writing	Oblique light and ESDA to examine for indentations from entries on Q1
EQG7MY	Transmitted light	To examine and compare the transmitted light features of the paper
EQGDZ8	electrostatic (EDD)	text of Q1 is present in indentations found on fourth full page in notebook which bears handwriting with date 3/2/15 and references to Math and English (K1).
EQGDZ8	microscopic	microscopic comparisons of torn left side of Q1 matched fibers on the first spine remnant still present in notebook K1. The ink mark near right side border on the bottom edge of Q1 is consistent with similar ink marks' color and location on other page bottom edges in K1.
EQGDZ8	hyperspectral (VSC) IR & UV	no differences were observed between the inks on Q1 and entries on the fourth page of K1. UV reflectivity of the Q1 paper is similar to K1 paper.

TABLE 2

WebCode	Methods/Techniques	Observations
EQGDZ8	microscopic	printed ruled lines on Q1 are varied and the pattern of variations for each line are consistent with those on the first spine remnant in K1, further confirming that Q1 was at one time joined with this first spine remnant in K1.
F37WRH	Microscopic/Macroscopic, Indented Writing, Tear Pattern Match	Examination for indented writings revealed impressions consistent with Q1 writing on page 3 of K1. Microscopic physical match revealed tear patterns from edge of Q1 corresponds with with[sic] torn edges from spine of first torn page from K1.
F3RV3F	Microscopic Examinations	Microscopic examinations revealed similar hue color of the Q1 and K1.7 inks and likewise was used to identify the inks as ballpoint. They also revealed evidence of fluency in the writing. These microscopic examinations also assisted in fracture and fiber comparisons.
F3RV3F	UV Examinations	UV examinations at 365nm, 312nm, and 254 nm of the paper used to produced Q1 and K1.4 - K1.6 revealed similar responses to ultraviolet light.
F3RV3F	Paper Examinations	Paper examinations revealed similar class and individual characteristics with respect to Q1 and K1.4. These exams revealed edge to edge lock and key alignment, page line alignment, and paper fiber alignment.
F3RV3F	Indentation Examinations	Indentation examinations were conducted with both grazing light and the ESDA. K1.7 front bears impressions from the original writing on Q1.
F3RV3F	Ink Examinations	Ink examinations revealed that the ink(s) used to produce the Q1 and K1.7 react similarly throughout the spectrum.
F3RV3F	Handwriting Examinations	Comparison was conducted between the writing on Q1 and K1.7. In comparing the writing, the lack of all uppercase letters and comparable words and word combinations, hindered the examinations.
F3TQM7	Visual Comparison	Portions of Q1 Indented writing was observed on K1 underlying spiral bound notepad sheet via oblique lighting.
F3TQM7	Comparison Microscope	The Q1 note fracture matched via the edges with the spiral bound piece located in K1.
F3TQM7	ESDA	Q1 indented writing was developed on the K1 underlying spiral bound sheet.
F42EV4	microscopic	Structure, fibers are matching each other by comparing waste paper from K1 with Q1.
F42EV4	Indented writing	using this method was possible to make visible on the K1 inscription "I WILL KILL YOU".
F4XHFJ	Stereoscope/VSC 6000hs (Fracture Pattern)	The examination of the torn left edge of the Exhibit Q1 and comparison with the K1 page 4 narrow strip (.5") of paper revealed that they matched and were at one point joined to be a complete page in the notebook.
F4XHFJ	VSC 6000hs (UV/paper)	UV characteristics of the Exhibit Q1 and Exhibit K1 strips (3) and sheets of paper (136) are consistent.
F4XHFJ	Side light and ESDA (Indented Writing)	Indented writing was found on the Exhibit K1 page 7 that was produced during the execution of the Exhibit Q1 note. This is clear in the ESDA results and somewhat visible in the side light photographs.



TABLE 2

WebCode	Methods/Techniques	Observations
F4XHFJ	VSC 6000hs (Ink)	There is a black line along the edge of the lower right portion of the exhibit K1 notebook which left a small black mark in the lower right edge of the pages in the notebook. Q1 has a black mark that is consistent in location and reaction to both IR absorption and IR fluorescence.
F4XHFJ	VSC 6000hs (Ink)	The black ball point ink found on the exhibit Q1 is consistent with the black ball point ink found on K1 page 7 in both IR absorption and IR fluorescence.
F4XHFJ	General Observation	There are four different sections in the notebook separated by plastic dividers. Including the Q1 item the sheet count is 38, 37, 38 and 38 from front to back.
F4XHFJ	General Observation	Page 7 of the Exhibit K1 contains a hand printed entry which is not comparable to the hand printed message found on Q1. These two messages are different in like letters, letter style and letter combination.
F8H8YW	Macroscopic examination	3 strips of paper ("strips 1 to 3") are attached to the binding (the rest of each page has been torn away) between pages 3 and 4 of K1; strips 1 and 2 were "stuck" together at the binding holes; I found no evidence of other paper remnants which would suggest the removal of other pages from K1, but this is not to say that other pages have not been (completely) removed from K1 (I have not counted the remaining pages nor made enquiries as to the manufacture source for information regarding the expected number of pages); a black texta mark is present on the bottom edge of Q1 in a similar location and form to marks on pages 3 and 4 of K1 (and other pages of K1); no distinction was observed between the black ballpoint pen inks; no distinction was observed between the paper stock; no distinction was observed between the black texta marks;
F8H8YW	Microscopic examination	the printed lines exhibit similar style, spacing, colour, thickness, imperfections and extraneous marks on Q1 compared with pages 3 and 4 of K1 (and other pages of K1); the position of the printed lines with respect to the upper and lower edges of the page is similar on Q1 when compared with strips 1 and 2, and different when compared with strip 3; the fracture pattern along the torn edge of Q1 is complementary to that of the torn edge of strip 1, and not to that of either of strips 2 or 3; no distinction was observed between the black ballpoint pen inks; no distinction was observed between the paper stock; no distinction was observed between the black texta marks;
F8H8YW	Oblique light examination	visible writing impressions in pages 4 and 5 of K1; the entirety of K1 was checked;
F8H8YW	ESDA examination	Q1 and page 4 of K1 only were examined using the ESDA; no impressions decipherable as writing impressions were developed on Q1; writing impressions were developed on page 4 of K1 which have their origins in the original writing on Q1, establishing that Q1 was (directly or indirectly) overlying page 4 of K1 at the time/s the entry was written; the alignment of the writing impressions with respect to the edge of the page is such as would be expected had Q1 been bound in K1; ESDA sequencing examination has not but can be undertaken if required with a view to determining the sequence in which the handwritings on Q1 and page 4 of K1 were written;

TABLE 2

WebCode	Methods/Techniques	Observations
F8H8YW	VSC6000	UV, IR, transmitted light and transmitted UV examinations were undertaken of Q1 and page 4 of K1; no distinction was observed between the black ballpoint pen inks; no distinction was observed between the paper stock; no distinction was observed between the printed lines; no distinction was observed between the black text marks;
FB28B7	Visual	Similarities with paper between q1 & k1; color, lines, paper & marks at the bottom of the pages.
FB28B7	Sidelight & EDD examinations	Impressions of the questioned information found on the K1 document.
FB28B7	Microscopic & backlighting	Physical match of the q1 edge of paper with cut and torn segment in the k1 ring binder.(fracture match)
FB28B7	physical match	The questioned text in q1 overlays with the EDD impressions on k1.
FB28B7	Ultraviolet and infrared	Examination of the q1 note.
FDN2UR	ESDA	Spiral notebook was separated for analysis. The 4th and 5th sheet down were run on the ESDA. Both the 4th and 5th sheet resulted in positive ESDA lifts with the wording of the note Q1. ESDA lifts were used to overlay over the actual note Q1.
FDN2UR	VSC	The sidelight feature only was used on the VSC to examine sheets 4, 5, 6 of K1. This feature was used to determine if impressions were visible. There were no impressions visible.
FDN2UR	Stereomicroscope	The olympus SZ61 stereomicroscope was used in attempt to physically match the note Q1 back to a torn edge out of K1. The edges were examined at 8x magnification. Q1 was physically matched back together to the edge of K1 (c).
FDN2UR	Ruler	A ruler was used to measure the note Q1 and the paper in the notepad K1. The note was placed back together with the strip left in notebook and all sheets measured the same.
FDN4JW	ESDA/oblique light	Indentations from Q1 revealed on page with writing inside K1
FDN4JW	Microscopic	Comparison of tear line on Q1 matches with uppermost torn spine from K1 demonstrating that they were once a single page.
FDN4JW	Macroscopic	Similar paper stock and line markings. Size similar. Ink mark at base of page similarly placed
FDN4JW	VSC	Ink marks at the base of Q1 and K1 cannot be differentiated
FDN4JW	VSC	Ink used in Q1 writing and ink used in K1 cannot be differentiated
FJTPPE	Visual	Q1 paper is closely similar in size, colour and line spacing to paper within K1. Black ink dot on bottom edge of Q1 is closely similar in size, colour and positioning to the black ink dot along the bottom edge of K1 notepad
FJTPPE	Microscopic	physical fit between torn edge of Q1 and torn edge of the first 'tab' in K1
FJTPPE	Oblique light	indented impressions of what appears to be handwriting visible under oblique light on the page bearing handwriting in K1

TABLE 2

WebCode	Methods/Techniques	Observations
FJTPPE	ESDA	indented impressions of handwriting reading 'I WILL KILL YOU' on the page bearing handwriting in K1. These indented impressions overlay precisely with the handwriting on Q1
FLH4ZA	Indented writing (oblique)	All Item K1 pages, Item Q1. Indented writing observed on pages 7-9 (Item K1).
FLH4ZA	Indented writing (ESDA)	Item K1, pages 1-3, 7-9, Item Q1. Indented writing observed on pages 7-9, Item K1.
FLH4ZA	Film Overlays	Determined source of indentations. Item Q1 text with Item K1, indented writing.
FLH4ZA	Transmitted Light Box	Feathering/fractures, torn edge comparison, Item K1, page 4 with Item Q1.
FLH4ZA	Hand Magnifier	Feathering/fractures, torn edge comparison, Item K1, page 4 with Item Q1.
FLH4ZA	Leica Comparison Microscope (40x)	Feathering/fractures, torn edge comparison, Item K1, page 4 with Item Q1.
FLH4ZA	VSC 6000	Similar ink properties. Handwriting on Item Q1 and Item K1, page 7.
FLH4ZA	Macroscopic	Class characteristics, Item Q1 and Item K1 Notepad.
FXW26E	Oblique Light/ESDA	Indentations from Q1 on page 7, 8 of K1 notebook
FXW26E	Microscope	Original writing on Q1
FXW26E	VSC 6000: magnification, ALS	Fiber correspondence between torn edges of Q1 and K1, p4
G2TANE	General Observation of the notepad	It contains ruled paper sheets; 3 pages were removed but a part of them yet remains. We observed that bottom of each page is marked by a black ink dot.
G2TANE	General observation of the questioned note	It's a sheet of ruled paper which left-hand side is cut. The bottom of the page is marked by a black ink dot.
G2TANE	Microscopic Observation	There is a perfect matching between the questioned note and the first cut page of the notepad (paper type; grey lines; cut; position of the black ink dot).
G2TANE	ESDA	Indented writing "I WILL KILL YOU" is revealed on the page after the cut ones of the notepad.
GCBNRG	Microscopic Comparison	Original writing, torn edge feathering fracture pattern and fibers
GCBNRG	Indented Writing ESDA	Indented writing on Item K1 piece of paper
GCBNRG	Sidelight	Indented writing on K1 piece of paper
GKNKVN	Microscopic Examination	Observed agreement in fractured edges of Q1 page with the first torn page in notebook.
GKNKVN	Indented Writing Examination - Electrostatic	Indentations reading "I WILL KILL YOU" are present on the page of the notebook which contains the writing "3/2/15".

TABLE 2

WebCode	Methods/Techniques	Observations
GKNKVN	Measurement - Ruler	Dark marks at the bottom of page Q1 and the notebook are approximately 1 7/64" from the right hand side.
GKNKVN	Digital Imaging - 600 dpi scans	Allowed for digital fracture match of the torn edges on Q1 to K1 (first torn page in notebook).
GKNKVN	Digital Imaging - Overlay	Allowed for digital overlay of the writing on Q1 with the indented writing impressions recovered on the page of the notebook which contains the writing "3/2/15".
GKNKVN	Paper Examination - UV/Infrared	Under alternate illumination sources, similar optical properties were observed for the paper comprising Q1 and that comprising K1.
GKNKVN	Ink/Printing Examination - UV/Infrared	Both the ink on Q1 and on the page containing writing in K1 exhibited similar optical properties.
GKNKVN	UV/Infrared - Fracture Match with 16x Magnif.	Similarities between the paper edges from Q1 and the fragment from the first torn page. Luminescent fibers present on both the torn edges above occupied a similar position along the fracture edge. Edges between Q1 and on fragments from torn pages 2 and 3: dissimilarities noted.
GPGKAJ	Macroscopic	There is an ink mark on the bottom right edge of Q1 that is consistent with the ink mark on the edge of the K1 notepad in appearance and location.
GPGKAJ	Microscopic	An integral parts examination revealed alignment of a specific fiber, the inked rule line and the torn edge of the paper indicating the Q1 originated from the K1 notepad.
GPGKAJ	Indented Writing	A page of the K1 notepad contained the indentations from the text of the Q1 exhibit.
GQPAFV	ESDA	The notepad revealed the words "I WILL KILL YOU"
GQPAFV	VSC (Superimposed)	A physical match was observed between Q1 and K1.
GV4E3A	ESDA(electrostatic detection apparatus)	Indentations(letter impression) indented impression
GV4E3A	microscope	paper comparison
GWXV7E	Indented writing (ESDA)	It was used to recover the indented writing "I WILL KILL YOU" in the notebook (K1) which corresponds with the writing on the document in question (Q1)
GWXV7E	Microscope	Used for paper comparison to determine if the note originated from the notebook.
GWXV7E	Video Spectral Comparator (VSC 400)	Comparing pages and page lines and determine if the page (Q1) originated from the notebook (K1). I found that the page lines on Q1 corresponds with those in the notebook (K1).
H32YUR	ESDA	The wording "I WILL KILL YOU" on the disputed threatening note marked "Q1" was indented on the page of the notepad marked "K1"
H32YUR	VSC (Sidelight)	The impressions or indentations of the wording "I WILL KILL YOU" were indented on the page of the notepad marked "K1"
H32YUR	VSC (White and Transmitted lights)	The threatening note marked "Q1" was physically matched to edges or left page margins of the notepad marked "K1"

TABLE 2

WebCode	Methods/Techniques	Observations
HCR8AT	microscopic/macrosopic	Each torn off page stub in notepad labeled as A,B,C was compared to the torn edge of the questioned note Q1. It was observed that the edge of stub A physically matched the edge of note Q1. The other edges of the stubs B and C did not display a physical match to Q1.
HCR8AT	Visual paper examination	A black texta mark was present on the bottom edge of pages of the closed notepad. Remnants of this texta line was observed on the bottom edge of Q1 and coincided in the same position as the pages next to the removed pages.
HCR8AT	spectral examination	Comparison of paper from K1 and Q1 revealed similar spectral properties.
HCR8AT	Indented impressions	The blank page beneath the page with handwriting commencing "3/2/15..." in K1 was examined using the ESDA. Indented impressions of the entries which appear on Q1 were detected as well as the entries commencing "3/2/15..."
HFNQBR	Microscopic examination	Examined torn areas of Item Q1 and 3 torn edges of paper left in notebook of Item K1. The 3 torn edges were eventually cut from the notebook and given designated numbers according to their place in the notebook i.e. 1, 2, and 3. The edges closest to the torn portion of the 3 pieces are bent upwards indicating that a straight edge may have been used to tear them all at once from the notebook. Physical match was made with the torn edge of the strip of paper marked no. 1 from the notebook in Item K1 and the torn edge of Q1. No other torn edges were located in the spiral portion of the notebook.
HFNQBR	Oblique angled lighting examination	Each page of the notebook in Item K1 was examined with oblique angled lighting as well as the paper in Item Q1. Indentations were observed on the page in the notebook that contained hand printing. This page was cut from the notebook for indented writing examination and marked as Item K1(a).
HFNQBR	Indented writing examintion[sic]	ESDA, test strip positive. Q1 and the full page that was cut from K1, K1(a), were processed for indented writing impressions. The indentations from the writing on Item Q1 were observed on Item K1(a).
HFNQBR	Flatbed scanner	Scanned Item Q1 and the torn edge of page marked 1 from Item K1 to demonstrate physical match. Scanned at 1200 dpi. See image metadata for scanner settings. Images were downloaded to a disk.
HFNQBR	Infrared examination	Test strip positive. No different reactions under Ultraviolet lighting. Two images downloaded to a disk.
HRGDGM	Electrostatic Detection Apparatus (ESDA2 and cascade toner)	No indented impressions of evidentiary value were found on Q1. Indented impressions were found on the front and back sides of K1d and K1e. These indented impressions support that Q1 was on top of K1d and K1e when the handprinting on Q1 was written.
HRGDGM	Video Spectral Comparator (VSC-6000)	Indented impressions were found on K1d and K1e.
HRGDGM	Microscopic	Black ballpoint ink was used to write the handprinting on Q1
J2GW39	macroscopic observation	Q1 K1 documents directly observed with magnifying glass and stereomicroscope and Contours, sizes and printing lines facing visually compare documents, to see if they have the same size, media type, print, documents and forms.

TABLE 2

WebCode	Methods/Techniques	Observations
J2GW39	Indented text analysis by video spectral comparator	Oblique incidence of light revealed indented text document on sheets of notebook Q1 K1, to find relief under left by the writing on the backsheet. [sic]
J2GW39	image overlay to compare fractures or torn paper by video spectral comparator	Observation and alignment of fractures or torn edges and paper documents against K1 Q1 and compared to find identities or not.
J2GW39	ink and paper analysis by video spectral comparator	ink and paper analysis by video spectral comparator Papers and inks versus Q1 paper and ink document to document exposure K1 365nm UV fluorescence are shown and reactions are compared to see if they are the same or different. ink and paper analysis by infrared fluorescence by video spectral comparator Inks documents and document against the document Q1 and K1 Ink document exposed to infrared spot exposure 665 nm fluorescence at 830 nm and the reactions were compared to see if they are equal or different. ink analysis by infrared absorption spectral video comparator Inks documents and document against the document Q1 and K1 Ink document to infrared exposure to 665 nm fluorescence 830 nm are shown and reactions are compared to see if the inks are absorbed or not under these wavelengths. [sic]
J9LGMT	Flood Light (VSC Instrument)	Physical match at the edges of the torn pages.
J9LGMT	Oblique Light (VSC Instrument)	Indented writing (of the reading "I WILL KILL YOU") observed on the first page after torn pages, ie on the page dated 3/2/15
J9LGMT	Electrostatic Detection (ESDA)	Indented writing (of the reading "I WILL KILL YOU") observed on the first page after torn pages, ie on the page dated 3/2/15
JLRRW2	Grazing, oblique lighting	Page in notepad with inked entries "3/2/15 Math:..." was examined with grazing light and found to have indentations from a page prior. Three pages had been torn prior to this page using a straight edge.
JLRRW2	ESDA	The above page was removed from the notepad and subjected to EDD examination. The exact and same words were found indented as appears on the questioned note.
JLRRW2	Visual	The same torn edge appears on the questioned note that appears from the torn page in the notepad. An ink mark appears on the questioned note on the lower right side of the bottom page in the same location as the ink marks on the notepad.
JLRRW2	IR	The ink mark on the questioned page bore no dissimilarities with the ink on the notepad.
JNWK7K	Macroscopic and microscopic examination	Visual examination noted the following similarities of Q1 to the top fragment of K1: ruled lines aligned on paper fragments; fracture match edge aligned between K1 and Q1; Additionally, black marking pen was used along the bottom edge of the pages. The markings on Q1 aligned when placed in proper orientation with K1.
JNWK7K	Indented writing examination (oblique/ESDA)	The K1 page "3/2/15..." was examined for indented writing. Indentations of the Q1 writing were found on the page "3/2/15..." of K1. Indented writing was detected and deciphered "I WILL KILL YOU" using the ESDA.
JRZD24	Visual/Microscopic	Q1 written with black ballpoint pen, medium speed, heavy pressure. K1-7 written with black ballpoint pen, medium pressure and speed.

TABLE 2

WebCode	Methods/Techniques	Observations
JRZD24	Digital Imaging	Imaged Q1, K1-7, ESDA lifts K1-7 front, K1-7 back, K1-8 back, Physical Match between Q1 and K1-4.
JRZD24	Visual/Microscopic	Between Q1 and K1-4 the following class characteristics were found for each: color of paper and lines (white and gray), type of paper(lined, size of paper (approx. length 13.8 cm), black marker line along bottom edge, vertical crease on side/edge on K1-1 - K1-3 and K1-7 - K1-35. Individual Characteristics found between Q1 and K1-4: realignment of lines, interfitting of fibers, tear patterns realigned.
JRZD24	Search Criminal Letter Database	There is no association with any previously submitted case in the database regarding Q1.
K84AWM	Macroscopic Examination	Paper quality, color and texture appeared similar between the Questioned note and the notebook pages. The printed lines also appeared similar. The fourth sheet (first torn sheet) of the notebook appeared to physically fit with the Questioned note.
K84AWM	Macroscopic Examination	Black ink present on the bottom of the Questioned note appeared to correspond in color and location with black ink present in a line on the bottom of the notebook.
K84AWM	Microscopic Examination	Paper fibers appeared similar between the Questioned note and the notebook pages. The fourth sheet (first torn sheet) of the notebook appeared to physically fit with the Questioned note.
K84AWM	VSC-4	Paper fibers appeared similar between the Questioned note and the notebook pages. Fibers present in the fourth sheet (first torn sheet) and the Questioned note appeared to line up in location with viewed under spot lighting.
K84AWM	VSC-4	No dissimilarities were seen between the ink present on the Questioned note and the notebook (seventh page).
K84AWM	VSC-4	Indented writing was seen on the seventh page of the notebook under side lighting containing some of the letters in the Questioned note.
K84AWM	ESDA	The seventh page of the notebook was examined using the ESDA and the words "I WILL KILL YOU" were seen. These corresponded with the words on the Questioned note.
KABUDV	Indented writiing[sic] (Oblique Light & ESDA)	Indented impressions of the handwriting on Q1 observed and enhanced on the page within K1 bearing the handwriting '3/2/15 Math...'
KABUDV	Physical fit (VSC & Microscopy)	Left hand torn perforated edge of Q1 corresponds to tear pattern on perforated edge of 1st stub within K1.
KABUDV	Ink examination (VSC & Visual)	Black fluid ink observed on similar location on bottom edge of Q1 and also bottom edge of pages within K1. Black fluid ink on both K1 and Q1 react similarly under specialist lighting techniques.
KYNVK6	obllique[sic] light	there is indented writing consistent with the handwriting in the note
KYNVK6	microscopic comparison	there is coincidence with the way it was cut it or removed it
KYNVK6	microscopic comparison	it have a mark with ink in a border
KYNVK6	air permeability of paper	there is not diference[sic] of pass of air through the paper, between the notepade[sic] and the threatening note.

TABLE 2

WebCode	Methods/Techniques	Observations
KZNU4D	Microscope / Visual	Questioned note Q1 was examined and physically matched to the first margin tab in exhibit K1 not containing a full piece of notebook paper. The K1 notebook contained a black line from front to back possibly made with a black fiber tip pen. The Q1 note contained a black mark in the same measured position as the notebook.
KZNU4D	ESDA	Indentations were found on full page #4 in exhibit K1 that deciphered as "I WILL KILL YOU"
KZNU4D	VSC	Paper and black ballpoint pen ink reacted consistently between the Q1 document and K1 notebook paper and the writing in the K1 notebook when examined with IRL and IRR
KZNU4D	Oblique lighting	When the notebook was examined using oblique lighting the indented writing found on page 4 of the notebook clearly revealed the works[sic] "I WILL KILL YOU"
L34P23	VSC 6000	It was observed that K1 and Q1 are written with the same ink.
L34P23	ESDA	I can see the indentation "I WILL KILL YOU" in K1
L34P23	Comparison	side by side
L43NJB	Stereomicroscope	Tear pattern examination. Black markings on Q1 and K1
L43NJB	UV lamp	UV fluorescence comparaisn[sic]
L43NJB	Indented writing (oblique and electrostatic)	Indented writings on K1
L7RU3L	microscopic/ macroscopic/ VSC (IR, IRL, UV)	No significant differences noted between Q1 and K1 in regards to physical characteristics of the paper. The inks used for the written entries on K1 and Q1 could not be differentiated using non-destructive techniques. The reverse side of Q1 and the reverse side of the pages of K1 contain extraneous marks above the printed line. The bottom edge of Q1 and the bottom edge of most of the pages of K1 contain an extraneous ink mark in approximately the same position. Pages 4-6 of K1 are partial pages that appeared to have been torn. The left edge of Q1 also appears to have been torn. A portion of page 19 of K1 appears to have been torn off and is adhering to page 20.
L7RU3L	handwriting comparison	Questioned written entries are block printed and not comparable to the hand printing in K1. Therefore, no opinion could be reached as to whether or not the questioned and known written entries were authored by the same writer.
L7RU3L	indented writings (oblique lighting, ESDA)	Q1, pages 1-3 of K1, page 7 of K1 were examined for the presence of indented writings. No indented writings were detected.
L7RU3L	physical match	A physical match examination was conducted on the torn edge of Q1 and the torn edges of pages 4-6 of K1. Q1 and page 4 of K1 share class and individual characteristics. Therefore Q1 and page 4 of K1 were joined at one time to form a single page.
LHL92H	Indented Writing (ESDA)	On the page with the writing beginning with "3/2/15", the handwritten text "I will kill you" is found on the ESDA lift. The text on the ESDA lift is an exact match to the text on Q1.



TABLE 2

WebCode	Methods/Techniques	Observations
LHL92H	Macroscopic	Marking with black ink on the bottom of the page corresponds to the marking on the bottom of the notepad. Physical fit on the edge of Q1 with the remains of paper in K1. Paper and lining on paper cannot be discriminated.
LTVMPW	Flood Light (VSC Instrument)	The physical match was observed between the disputed note marked "Q1" and the first torn piece of paper found in the note pad marked by myself as "K1A". It was a positive physical match. No physical match can be found, between the disputed document "Q1" and the other two torn pages from the notepad marked by myself as "K1B" and "K1C".
LTVMPW	Oblique Light (VSC Instrument)	The[sic] were very little indentations found on the page marked by myself as "K1D".
LTVMPW	Electrostatic Detection (ESDA)	Indented writing was observed on the page marked by myself as "K1D" in the notepad that read "I WILL KILL YOU".
LUERHA	UV	UV exam @ 254 nm, 312 nm and 365 nm. Response from Q1 and K1 pg 7 - All consistent, no visual differences noted for optical brighteners[sic].
LUERHA	Paper Thickness Micrometer	Q1 consistent in thickness with K1 pg 8 range 0.0025" - 0.0030"
LUERHA	ESDA	K1 pg 7 has ESDA pos of text of Q1.
LUERHA	ESDA	Q1 - Negative of investigative value.
LUERHA	Visual	1) Black ink mark at bottom of K1 notebook (continuous line top-bottom) consistent w/ Q1 black mark in size and location and type of writing instrument (porous tip). 2) Paper size & line spacing (general) consistent Q1 vs K1 pg. 7. 3) K1 pg. 4 piece of paper (a torn remnant) is best fit for line spacing and line (inked line) thickness. 4) Line color consistent in Q1 vs K1 pg. 4, 5, 6. 5) Paper edge cut blade marks (striations) were seen in K1 notebook. At this point in the examination, the cut striation marks on Q1 were not visualized. 6) Gross physical fit Q1 w/ K1 pg. 4, no cross linked fibers noticed.
LUERHA	Microscope	10x-90x - looking for cross-linked paper fibers non-found.
LUERHA	IR Luminescence	Cross linked fibers visualized on Q1 and K1 (pg 4)
M2ATZU	Used VSC 6000 and applied flood light	To conduct physical match between Questioned Note and torn part of Notepad. Image of Questioned Note's writing "I WILL KILL YOU" fit perfectly with the indentation when overlaid on the notepad.
M2ATZU	Used VSC 6000 and applied side light	To reveal indentation of the words "I WILL KILL YOU" on the Notepad.
M2ATZU	Used VSC 6000 and applied UV light	Matched Questioned Note and torn part of Notepad are UV bright, react similar under UV light which can only mean that they originate from the same source.
M2ATZU	Used ESDA 2	For the deciphering of indentation of the "I WILL KILL YOU" on the Notepad.
MEEB92	ESDA	ESDA exams were conducted on laboratory verification sheet followed by tests of Q1 (front/reverse), K1 (written page front/reverse), K1 pages preceding & following the written page (each front only), K1 (written page front and reverse show vestiges of the Q1 writing indentations.

TABLE 2

WebCode	Methods/Techniques	Observations
MEEB92	handheld loupe	Hand held 10X loupe was utilized with ambient office light to examine black line observed at bottom of K1 book along with black dot observed at bottom of Q1 sheet.
MEEB92	VSC	VSC exam was conducted using flood, UV, transmitted and side light sources. Examiner's case notes contain detailed images and observations.
MFRGCD	Video-comparador espectral Foster & Freemann [sic]	VSC 2000/HR model.
MFRGCD	ESDA, marca Projectina, modelo Docustat [sic]	To obtain latent writing.
MFRGCD	Microscopic Analysis	Microscopio estereoscopico, marca Leica, modelo S6D. [sic]
MFRGCD	Magnifiers 10 and 15 increases	Magnifiers 10 and 15 increases
MGMZFY	Visual Examination	The Q1 notebook page and the K1 notebook have a consistent black ink line on the bottom edge, approximately 1" from the right edge. Three pages were removed and left edges of those pages are still attached in the spiral notebook.
MGMZFY	VSC Examination	Side lighting revealed illegible indentations on the page following the removed pages in the K1 notebook. An ultraviolet examination of the paper used to prepare the Q1 note and the paper in the K1 notebook at 254, 313, and 365 nm resulted in consistent reactions.
MGMZFY	ESDA Examination	An ESDA examination of the page following the removed pages revealed indentations consistent with the hand printing on the Q1 note.
MGMZFY	Microscopic	The left edge of the Q1 note was consistent with the 1st paper stub in the K1 notebook.
MHY8QZ	VSC 6000 (UV-NIR)	Entries on page 5 of K1 and entry "I WILL KILL YOU" on Q1 were made with use the same ball pen ink or two ball pen inks with the same optical properties.
MHY8QZ	VSC 6000 (UV-NIR)	Papers of K1 and paper of Q1 have the same optical properties.
MHY8QZ	microscopic analysis	Characteristic black point on the bottom edge Q1 was determined. Analogical points are situated on bottom edges of K1 sheets - probably a marker-pen was used to make black line on folded sheets of K1.
MHY8QZ	microscopic analysis	The right edge of the piece of K1's page 4 and the left edge of Q1 bear characteristic marks that confirm that they were one piece of paper.
MHY8QZ	indented writing - oblique light	On K1's page 5 the indented writing "I WILL KILL YOU" was revealed
MHY8QZ	VSC 6000 - mix image mode	The indented writing "I WILL KILL YOU" on K1's page 5 and entry "I WILL KILL YOU" on Q1 have the same topography and constructions of analogical letters.
NADVP4	Macroscopic Examination	Similar page dimensions and ruled line spacing. Absence of at least 3 pages in K1. Ink spot on bottom edge of Q1 aligns with ink stripe on K1.

TABLE 2

WebCode	Methods/Techniques	Observations
NADVP4	Latent Indented Writing	Indentations seen with visible grazing light on Pg 7 of K1 agree well with handwriting on Q1. EDD examination of Q1 disclosed no indentations. Without disassembly, not practical to examine K1 for indentations using EDD.
NADVP4	Printing Process	Microscopic appearance of ruled lines on obverse of Q1 differed from reverse, but agreed well with respective sides on page remnants in K1.
NADVP4	Fracture Matching	Good agreement between left edge of Q1 and first remnant (page 4) of K1. Disagreement between left edge of Q1 and second (page 5) and third (page 6) remnants of K1. Fracture appears to be made by straightedge tearing due to straight line indentation running parallel to fracture on Q1.
NBPZE9	Indented writing examination	Indented writings of "I WILL KILL YOU" are detected[sic] on the paper.
NBPZE9	Oblique light of VSC 6000 HS	Which writes "3/2/15....worksheet" in the notepad K1
NBPZE9	Docustat-Electrostatic Document Analyzer	[No observations reported.]
NBPZE9	Microscopic/ Macroscopic[sic] examination	It is also[sic] the detected edge of the Q1 matches with remaining part of the paper in the notepad K1
NC6KHX	Microscopy	The paperlines on the note and those of the notepad pages are printed with offset printing. Examination of the ripping edges (notepad and threatening note).
NC6KHX	Transmitting light	There is a slight mismatch between the printed lines on the front of the note to the ones on the back.
NC6KHX	Extravizual examination	The paper of the threatening note could not be distinguished from the paper in the notepad. The black color on the lower edge of the note has the same appearance as the color of the black line that runs across the paper edges of the notepad.
NC6KHX	ESDA	No evidence was found.
NC6KHX	Oblique Light	No evidence was found.
NERXP2	visual examination method	Threatening note(Q1) and notepad(K1) both have the same 17 horizontal stripes. Threatening note(Q1) and notepad(K1) both have black ink at the consistent position of the lower right corner.
NERXP2	light penetrating method	The threatening note(Q1) and the first of three torn paper part of the notepad were put together and examined by light penetrating method. It is found that two pieces from separate locations are reconstructed to form a continuous section of paper to indicate a physical match.
NERXP2	ESDA and overlapping comparison	By using ESDA, a handwriting impression, "I WILL KILL YOU", is developed on the first undamaged paper after 3 torn paper parts. The handwriting impression on the paper and notes on the Q1 document are matched by overlapping comparison.
NHQE3V	Visual (Macroscopic)	Q1 and pages of K1: Similar general appearance; Q1 appears to fit the size of the torn-off page from the page 4 stub in K1; Similar relative positioning of black mark at bottom edge of Q1 and page 3 of K1; the black mark appears throughout the pages of K1.

TABLE 2

WebCode	Methods/Techniques	Observations
NHQE3V	Visual (Macroscopic) continued	Variation in line spacing among pages in K1; Line spacing of Q1 appears similar to page 4 stub of K1, and different from pages 1, 2, 3, 7, the page 5 stub and page 6 stub.
NHQE3V	Physical Match of Paper/Fibres (Microscopic)	Torn edge of Q1 appears to match to page 4 stub of K1; Random yellow fibres near torn edge of Q1 matches to those near torn edge of page 4 stub of K1.
NHQE3V	Indentations (Oblique lighting)	Indentations on page 7 of K1 that appear to correspond to the letters "I", "W" and the first "L" in the phrase "I WILL" in Q1.
NHQE3V	Paper (UV)	Q1 and pages of K1: Similar appearance under UV light
NVZHJG	Microscopic	Utilizing a LEICA MZ95 microscope and attached LEICA DFC550 camera, identified and captured matching fracture matches from the first spiral remnant to the questioned note.
NVZHJG	Comparison/Observation	Compared the pages of the notebook to the questioned note and observed a marker on the edge of all the pages in the same approximate location.
NVZHJG	Electrostatic (ESDA2)	Examined Exhibit 1(7) (page from the notebook with writing) for the presence of indented writing images using the ESDA2. Indented writing images from Q1 were present on Exhibit 1(7).
NVZHJG	Instrumental VSC6000/HS	Identified luminescent fibers present in the pages of the notebook and Q1. Several of those fibers were observed and recorded as being cut from the first spiral remnant and Q1.
P8B68V	Scientific method in the stages of observe, describe, compare and make judgments that there is place oriented to the analysis of the research document support.	First it was verified the quality of paper to determine whether it is common or have any brand in particular view to the after light and ultraviolet light, then analyzed its surface, its sizing and its thickness, to establish possible differences between one and other leaves.[sic]
P8B68V	Macroscopy and microscopy with lighting diascopic and episcopic and ultraviolet light, for general and detailed exploration of sizing or gluing of papers questioned[sic] and disputed to verify the integrity of the support.	Cut each of the three fragments of the questioned book paper is analyzed to determine the perfect case between their edges, using high increases the stereoscopic binocular with direct and oblique light and the VSC6000/HS, to observe paper filaments protruding from characteristic way at their edges and determine their origin or not.[sic]
PB6LLP	ESDA	Indentations on the note pad "K1" reading "I WILL KILL YOU".
PB6LLP	VSC: Magnification and Oblique light	Indentations on the note pad "K1" reading "I WILL KILL YOU".
PB6LLP	VSC: Magnification and Flood light	Physical match on the threatening note "Q1" and the first torn page on the note pad "K1"
Q9F6WU	Microscopic/Macroscopic Examination	(a) the black marking at the bottom of Q1 aligned up with the black marking at at[sic] the bottom of K1. (b) both Q1 and K1 were of the same dimension. (c) The first torn out edge - left margin in K1 aligned up with the left edge of note Q1.

TABLE 2

WebCode	Methods/Techniques	Observations
Q9F6WU	Ink Examination (ultra-violet, infrared - absorption/luminescence, visible)	There were no significant differences observed between the note (Q1) and the (3) torn out edge - left margins as well as the first few pages after the torn out edges - left margins of K1.
Q9F6WU	Indented writing - Electrostatic, obliques, other.	Black writing 'I WILL KILL YOU' was seen on page after the (3) torn out edges of K1. White writing 'I WILL KILL YOU' was seen on note Q1.
QBQ3AC	Microscope	Paper fibers observed crossing over Q1 to K1. Surface markings crossing over from Q1 to K1 and from bottom edge of Q1 to K1 consistent. Striation marks on K1 compared to Q1 but not conclusive. Edge pattern on Q1 & K1 matched.
QBQ3AC	ESDA	A faint impression of the text on Q1 was found on a sheet within K1 - overlay super imposed where an indented impression was visible.
QBQ3AC	VSC - UV light	Both Q1 & K1 sheets fluoresced similarly - class similarity.
QGEKTU	MICROSCOPIC	Facing the edges in the threatening note, with cuts of detached leaves of the book, in 4th sheet positions, 5th and 6th leaf sheet, we see that the edges fit perfectly with the cutting blade in 4th position, corresponding to first of three leaves cut out of the book.
QGEKTU	MACROSCOPIC	There ducts or channels caused by pressure on the threatening note with the pencil, are products that correspond to the text of the manuscript being studied.[sic]
QGEKTU	MACROSCOPIC	At the edge of the bottom right of the threatening note, is blask[sic] ink, which fits perfectly with a vertical line drawn at the edge of the notebook.
QGEKTU	INK EXAMINATION	The ink used to prepared[sic] a manuscript holds similar physical characteristics of the ink found in the manuscript sheet sheet[sic] 7 of the notebook.
QL3CUV	Microscopy Comparison Techniques (& Measurement)	Tears correspond i.e. Physical fit and measurements. Felt-tip line corresponds when note is placed in notepad.
QL3CUV	ESDA	Indented impressions from the writing on the note found on page in notepad (next to tears)
QL3CUV	VSC 6000	IR/UV - Felt-tip and pen - same reaction
QMJGCU	Observation macro	Observation of class and individual characteristes[sic] in the known sample and/or cuts in the paper sheets.
QMJGCU	Videocomparation[sic] Spectral[sic] (vsc 6.000)	The printed characteristics of item K1 are consistent with those of Item Q1.
QMJGCU	Comparison Techniques	[No observations reported.]
QMJGCU	Stereomicroscopy	[No observations reported.]

TABLE 2

WebCode	Methods/Techniques	Observations
QPLJYB	Macroscopic	Item 1 (K1) is a 5" X 4 1/2" spiral note pad with 146 pages and three paper remnants remaining; identified as follows: Item 1.1 to 1.3 (K 1.1-1.3): First three remaining pages. Item 1.4 to 1.6 (K 1.4-1.6): Three remnants remaining on the spiral binding where pages appear to have been torn with an apparent straight edge. Item 1.7 (K 1.7): Fourth remaining page in the notepad with writing. Item 1.8 (K 1.8): Remaining pages in the notepad. Item 2 (Q1) is a threatening note bearing the words "I will kill you". There is a torn edge on the left side of the page. The paper size and markings (i.e. lined note paper) is consistent with the paper size and markings in the Item 1 (K1) notepad.
QPLJYB	Oblique lighting	Portions of text from Item 2 (Q1) was observed on the fourth remaining page, Item 1.7 (K 1.7), in the Item 1 (K1) notepad
QPLJYB	VSC ESDA	Prepared ESDA test strip. Ran ESDA examination on test strip and fourth remaining page in the Item 1 (K1) notepad. The text from Item 2 (Q1) is recorded on the fourth remaining page, Item 1.7 (K 1.7), of the notepad in the form of indented impressions.
QPLJYB	UV and VSC side lighting	Portions of the text from Item 2 (Q1) again observed on the fourth remaining page in the Item 1 (K1) notepad. Limited fluorescent[sic] fibers are very short and do not transect torn edges.
QPLJYB	Microscopic	Microscopic examination of torn edge from Item 2 (Q1) compared with torn edges of the three remaining paper remnants in Item 1 (K1). The tear pattern from the first paper remnant, Item 1.4 (K 1.4), matches the torn edge on Item 2 (Q1) and was identified as the source for the questioned document. Items 1.5 and 1.6 (K 1.5 and K 1.6) were eliminated as the source for the questioned document.
QV9P27	MICROSCOPIC EXAMINATION	A microscopic examination revealed that the tear edges on the threatening note (Q1) correspond with the tear edges of the first torn page on the note book (K1). A black mark on the note (Q1) fits perfectly with the existing black mark on the note pad.
QV9P27	ESDA TECHNIQUE	An ESDA technique has deciphered indented writing "I WILL KILL YOU" which was compared with the writing on the threatening note.
QV9P27	VSC TECHNIQUE	Video Spectral Comparator (VSC) has revealed some indentations on the note pad through side lighting. A side-by-side comparison of the comparison of the tear marks has revealed strong correspondences between the edges of the threatening note (Q1) and the note pad (K1).
R2T2FY	Using sidelight and oblique light	We see intended[sic] writing "I will kill you" in the notepad k1 which similar to sentence in the threading[sic] note
R2T2FY	Microscope	We saw black ink at the end of the threatening note q1 which is similar to the black mark in the note pad k1
R2TRE8	Macroscopic/Visual	Macroscopic Visual - To check similarities in paper, colour, size, guidelines, creasing and location of ink stain between K1 and Q1.
R2TRE8	Microscope	Microscope - To verify[sic] the presence of a physical fit along the tear line of the paper in Q1 and the strip of paper, 4th in from the front in K1.
R2TRE8	Indented Writing/ESDA	ESDA - Indentations of the writing on Q1 were found on the front of page (numbered 7) in K1.
R2TRE8	Ultraviolet/VSC	VSC - Use of UV light to verify fluorescence the same for the paper in K1 and Q1.

TABLE 2

WebCode	Methods/Techniques	Observations
R3CFYM	ESDA	Examination of the 7th page of the notepad revealed indented marks of writing. The indented marks of writing were found to be superimposable to the handwriting on the threatening note.
R3CFYM	Oblique lighting	Indented marks of writing were deciphered on the 7th and 8th page of the notepad.
R3CFYM	Microscopic Examination	The torn edge of the threatening note could be physically fitted together with the torn edge of the paper fragment of the 4th page of the notepad.
R3CFYM	Microscopic Examination	The threatening note and the inner pages of the notepad were agreed in color, height, design of background printing and unique dirt marks (ink stains on the lower right hand edge of the page).
R3CFYM	Macroscopic Examination	The 4th, 5th and 6th pages of the notepad were ripped out, paper fragments of 4th, 5th and 6th pages were still attached to the spiral ring.
R4XFUW	Side Lighting	Indented writing on page from Item K1
R4XFUW	ESDA	Indented writing on page from Item K1
R4XFUW	Microscope	Torn fragments from 1st page fragment from Item K1 that indicated that page fragment and Item Q1 were at one time one sheet of paper.
R7QM6G	VSC 6000	Physical Match marked Q1 originated from the note pad K1(a). K1(b) and K1(c) did not physically match the note.
R7QM6G	Oblique Lighting	Side lighting was used for the detection of indentations.
R7QM6G	VSC 6000	Super imposing an image for matching of the indentations and the original writing.
R7QM6G	ESDA 2	The latent indented words "I will kill you" become visible on "K1" using the electro static detection apparatus
RAQGWB	Macroscopic	Black fluid ink on edge of Q1 aligns with Black fluid ink mark on K1.
RAQGWB	VSC - Microscopic/UV	Fracture match of Q1 to K1 torn edges. UV reactivity of Q1 and K1 similar.
RAQGWB	Indented writing - Oblique	Impressions on K1 sourced to Handwriting on Q1.
RAQGWB	Macroscopic	General measurements of Q1 and K1.
RFVRXX	Examine with VSC 6000/HS	The Q1 and K1 have identical color, brightness, opacity and UV fluorescence of paper samples.
RFVRXX	Examine with oblique light	1.No decipherable or unexplainable indented impressions were observed on the Q1 and K1 paper samples. 2.Using oblique lighting, it could disclose vertical cut/indent markings on the paper surfaces of the K1 notepad.
RFVRXX	Natural light and visual inspection including utilization of a microscope	1.The Q1 and K1 have same the surface texture and printing image quality of the paper samples, for example ruled line width, spacing, and deformed patterns. 2.The Q1 and K1 found consistent black traces located on tail edge of the paper samples. 3.Matched the Q1 and K1, and cut edge abnormalities appear along the vertical edge of the match body as small irregular cuts or tears. The Q 1 paper was in the right cut portion of the K1 notepad paper. 4.The Q1 and K1 have similar dimensions (length, and thickness) of the paper samples.

TABLE 2

WebCode	Methods/Techniques	Observations
RJDFMG	Microscopic Examination	A visual match of the paper fibers was observed between the tear of the left hand edge of the Q1 paper and the first of three remaining paper portions in the spiral of the K1 booklet, numbered K1.1. Rulings found on the Q1 paper were consistent in color and position as that on K1.
RJDFMG	Oblique light/ESDA examination	Indentations matching the text found on the Q1 note were found on pages K1.4 and K1.5 of the K1 booklet utilizing oblique light and ESDA. Examination of the K1.6 page (preceding K1.4 and K1.5) revealed no indentations.
RJDFMG	Infrared/Ultraviolet examination	Optical examination revealed no appreciable differences between Q1 and K1.4 with respect to paper, rulings, or writing inks, however, the writing inks did appear to have a slight variance in reaction, so a destructive examination is recommended to preclude any chemical differences.
RJDFMG	Micrometer	The Q1 and K1 papers were found to be the same thickness.
RJX7RV	ToolScan (digital comparison microscop[sic])	corresponding tearmarks
RJX7RV	ESDA (electrostatic detection apparatus)	identical text as on threatening note
RKM6UE	ESDA2	Indentations revealed the words "I WILL KILL YOU" which was slightly faint
RKM6UE	VSC6000 (UV Light)	Substrate[sic] characterization - both K1 and Q1 are UV bright
RKM6UE	VSC6000 (Side Light)	Indentations revealed the words "I WILL KILL YOU" which was slightly faint
RKM6UE	VSC6000 (Flood Light)	Superimposing and physical matching of Q1 and K1 to corroborate indentations
RZM8R8	Visual exam (Microscope, Scanner)	Visual exam and scanned Exhibits Q1 and K1 for documentation purposes. Then removed pages and designated as 1-3, spiral remnants of pages 4-6, and pages 7-9 from K1 for further examination.
RZM8R8	Indentation exam (ESDA)	Negative results for Q1 and K1 (pages 1-3). Positive results for K1 (pages 7-9). Indentations recovered on K1 (pages 7-9) appear to read "I WILL KILL YOU", which is the same entry on Q1. This indicates that K1 (pages 7-9) was beneath Q1 when it was written.
RZM8R8	Visual exam (Microscope, Miscope, VSC)	The torn edges of Q1 and K1 (spiral remnants of pages 4-6) were examined and compared. Q1 originated from (was once part of) K1 (notepad), specifically the spiral remnant of page 4.
RZM8R8	Visual exam (Microscope, Miscope, VSC)	Black line of liquid ink present along the bottom right edge of K1(notepad) and the bottom right portion of K1 (pages 1-3 and 7-9), is also depicted in the bottom right portion of Q1.
T2T9RW	Microscope	To observe fracture pattern between K1 p4 and Q1.
T2T9RW	ESDA	To observe indented writing on K1 p7.
T2T9RW	VSC	To observe paper fiber crossings between K1 p4 and Q1.
T2T9RW	Sidelight	To observe indented writing on K1 p7.



TABLE 2

WebCode	Methods/Techniques	Observations
TCTHW9	Video Spectral Comparator (Foster and Freeman VSC 6000) Stereo Microscope	I compared each of the three attached remnants of pages within the spiral notebook to the edge of the questioned page. The edge of the questioned page matches the first of the three remnants (which would be the fourth page of the spiral if no other pages were removed.) The edge match conforms to the angle of the tear from the edges of the page and the remnant and to minor edge tear features. The angle is also a close feature of the other two remnants but the edge tear features are strong evidence that the questioned page, Q1, was torn from this remnant in the notepad, K1. Illustrations attached. [Illustrations were not included with the report].
TCTHW9	Electrostatic Detection Apparatus (Foster and Freeman)	Examination for latent writing impressions, analysis of questioned note and remaining page under torn remnants performed. All pages of notebook examined with incident lighting. No latent writing impressions of value were detected. Copies of ESDA restorations are attached. [Copies were not included with the report].
TCTHW9	Video Spectral Comparator (Foster and Freeman VSC 6000)	Examination performed of ink of note and ink on page in notebook. The questioned ink and the ink in spiral notebook, headed 3/2/15, match in all VSC responses. This is circumstantial evidence of a connection of the questioned page to the notebook.
TCTHW9	Video Spectral Comparator	Examination performed of ink on edge of note and ink on edge of page in notebook. The mark on the questioned page matches all VSC responses as the marks on the edge of the notebook. This, together with the position of the mark on the questioned page that matches the position of the marked edge of the spiral pages is additional evidence that the questioned page was removed from the spiral.
THDE6B	Desk Microscope	The black mark on Q1 matched that found on document K1
THDE6B	VSC	Fibre damage on Q1 were accounted for on the torn part of document
THDE6B	ESDA	The writing appeared on the next page of the book K1
TJ8ZWG	VSC 6000 (Flood Light)	The questioned note physically matches with the notepad where the questioned note was removed from the notepad.
TJ8ZWG	VSC 6000 (Side Light)	The indentation of writing "I WILL KILL YOU" from the questioned note appears on the notepad.
TJ8ZWG	ESDA2	The indentation of writing "I WILL KILL YOU" from the questioned note appears on the notepad.
TKNKZ6	Physical Measurements	i. Dimension of paper - "Q1": ~89.0 mm x 138.5 mm. "K1": P.1: ~102.0 mm x 138.5 mm. P.4: ~14.5 mm x 138.5 mm. P.5: ~14.5 mm x 138.5 mm. P.6: ~14.5 mm x 138.5 mm. ii. Thickness of paper - "Q1": ~0.07 mm. "K1": P.1: ~0.07 mm. P.2: ~0.07 mm. P.3: ~0.07 mm. P.4: ~0.07 mm. P.5: ~0.07 mm. P.6: ~0.07 mm. P.7: ~0.07 mm. P.8: ~0.07 mm. iii. Black ink stroke at the bottom edge of "K1". "Q1": ~21.0 mm from the right edge. "K1": P.3: ~21.0 mm from the right edge. P.7: ~21.0 mm from the right edge.

TABLE 2

WebCode	Methods/Techniques	Observations
TKNKZ6	Microscopic	i. Physical matching of torn edges. Torn edge of "Q1" was found to be matched with the torn edge of P.4 of "K1". ii. Print quality of ruled lines. For all the sheets of paper between the front cover and the red divider in "K1", print quality of the ruled lines on the front side was found to be better than that of the reverse side. In "Q1", print quality of ruled lines on the front side was also found to be better than that of the reverse side. iii. Printing ink dots. Printing ink dots were found above some of the ruled lines in both sides of pages 1-8 of "K1" and in "Q1".
TKNKZ6	Indented writing	i. Electrostatic. The words "I WILL KILL YOU" were deciphered from the ESDA lifting of P.7 of "K1". ii. Oblique lighting. A faint impression of some strokes was noted on P.7 of "K1". No words could be deciphered from that impression.
TKNKZ6	Ink examination using Video Spectral Comparator (VSC)	i. Handwriting ink. No differences in optical properties between the ink of the handwriting on P.7 of "K1" and that on "Q1" were observed. No writing offset (or ink transfer) on reverse side of P.3 was noted using different wavelengths of light. ii. Printing ink. No differences in optical properties between the printing ink of ruled lines on "Q1" and those on pages 1-8 of "K1" were observed. iii. Ink stroke on the bottom edge of "K1". No differences in optical properties between the ink on the bottom edge of "Q1" and those on "K1" were observed.
TKNKZ6	Paper examination	i. VSC. No differences in optical properties between "Q1" and pages 1-8 of "K1" were observed. ii. Watermark. No embedded watermark was found in "Q1" and in pages 1-3 and 7-8 of "K1". iii. Paper fibre pattern. No distinguishable paper fibre pattern was observed in "Q1" and in pages 1-3 and 7-8 of "K1". iv. Paper fibre match. Paper fibres on the torn edge of P.4 of "K1" were noted to be matched to those on the torn edge of "Q1".
TNL2BE	Microscopic Examination	tear patterns (Q1) similar with 1st torn page in notepad (K1), indentations observed in notepad
TNL2BE	Indented writing	Oblique - indentations observed, electrostatic - text from Q1 detected on one page from K1 notepad.
TNL2BE	VSC-IR,UV	IR - paper fibers examination - fibers similar in Q1 and K1 at torn edges UV - similar properties between Q1 and K1
TNL2BE	Micrometer	Similar thickness measurements.
TUATE2	Microscopic/Macroscopic exam/comparison	For Q1 and K1, page 4 (the first torn segment in K1) the following features match: paper size/type, colour, edge/guillotine markings, corner cuts and punched holes. A small black in[sic] mark on the bottom edge of Q1 also matched those on K1, pages 3 and 7 in terms of location and shape.
TUATE2	Physical matching comparison (macro/micro)	The tear profile along the left edge of Q1 corresponds perfectly with the tear profile along the right edge of K1, page 4 (both when viewed from the front and reverse, as well as diagonal tears through the paper). In addition, individual fibres and fibre bundles were observed along the tear profile that appear to 'cross-over' between Q1 and K1, page 4. The commercially-printed ruled lines on Q1 and K1, page 4 were also observed to align.
TUATE2	Spectral examination (VSC - IR luminescence)	Luminescent fibres were visualized along the torn edges of Q1 and K1, page 4. Several fibres/fibre bundles were observed that appear to 'cross-over' between the two items (as per the above observation).

TABLE 2

WebCode	Methods/Techniques	Observations
TUATE2	Indented writing - EDD (ESDA) examination	Latent indentations corresponding exactly to the visible writing on Q1 were developed on K1, page 7.
TUATE2	Additional observations using above methods	Q1 was also compared to Item K1, pages 5 and 6 (the other two torn segments in K1). The general characteristics of these segments also matched however the tear profile and printed ruled lines did NOT match with several differences being observed.
TZHLKD	Flood lights (VSC 6000)	physical match on the torn pages.
TZHLKD	Electrostatic detection (ESDAO[sic])	Indented writing of the reading "I WILL KILL YOU" observed on the first page after torn page dated 3/2/15
TZHLKD	Side lights (VSC6000)	Indented writing "I WILL KILL YOU" observed after torn pages dated 3/2/15
U9LN9M	Magnification and flood light for physical match	A physical match between "Q1" and "K1" was positive ("Q1" was matching with "K1").
U9LN9M	Electrostatic detection apparatus for indentations	Indentations of the questioned note "Q1" reading "I WILL KILL YOU" were observed on the first page immediately after the remnants of the cut pages on the notepad "K1"
U9LN9M	Magnification and oblique (side) light for indent	Indentations of the questioned note "Q1" reading "I WILL KILL YOU", were observed on the first page immediately after the remnants of the cut pages on the notepad "K1".
UKKC9X	Macroscopic/Microscopic	Ink deposits on bottom edges of pages
UKKC9X	ESDA & oblique lighting	Indented writing present in K1 notebook - corresponds to text from Q1 note
UKKC9X	VSC, Microscopic	Side-by-side comparison of torn edges with magnification, transmitted, and regular lighting; magnification and alternate lighting to observe crossing of paper fibers - Contour and feathering of torn Q1 edge correspond to torn edge of page 4 in K1 notebook.
V8CWZ8	Electrostatic Detection Apparatus (ESDA)	ESDA exam of standard designated K-1 7. Impression evidence recovered interpreted as "I WILL KILL YOU". Original ESDA result labeled K-1 7.1 and returned to investigator. Copies made for case file and to attach to evidence envelope.
V8CWZ8	Integral parts matching	Q-1 was once an integral part of K-1 notebook, specifically from paper remnant labeled K-1 4. Paper fiber matches can be seen on the front of K-1 4 vs. Q-1 between the 7th & 8th line up from the bottom of the documents. Also, matches observed on the back of K-1 4 vs. Q-1 above the first line from the top of the documents.
V8CWZ8	Microscopic techniques	Q-1 is similar in appearance and dimension to the sheets of the K-1 notebook. The Q-1 displays a black ink mark on the bottom right of the document which is similar to how many of the other K-1 notebook sheets are marked.
VAUDTC	Visual	Spiral notebook, no manufacturer's data, black mark across bottom edges, many pages stuck together at punched holes for spiral, loose pages, three stubs, impressions into seventh lined sheet, printed lines and edges and black marks align between Q1 and K1, fracture contour information.

TABLE 2

WebCode	Methods/Techniques	Observations
VAUDTC	stereomicroscopic	Q1 and K1 writing done with black ballpoint pen, impressions present in page seven and some further pages, two stubs are not consistent with fracture contour of Q1, one K1 stub is consistent with Q1 in fracture contours, surface configurations, and fracture line paper fiber distribution.
VAUDTC	electrostatic detection apparatus	No handwriting impressions on first three sheets of lined paper or on Q1, Q1 handwriting found impressions into seventh page of K1, no impressions of handwriting not already seen found throughout the remainder of the notebook
VAUDTC	spectral imaging	No further handwriting, not already seen, found throughout the notebook, or on item Q1.
VAUR9C	Flood Light (VSC Instrument)	Physical match at the edges of both the note and the notepad.
VAUR9C	Oblique Light (VSC Instrument)	Indented writing observed on the first page after torn pages, ie on the page dated 3/2/15 on the notepad.
VAUR9C	Electrostatic Detection (ESDA)	Indented writing observed on the first page after torn pages, ie on the page dated 3/2/15 on the notepad.
VC26TY	Microscopic	I viewed the Q1 and K1 under a microscope and compared the torn edges from both and found that the edges fit.
VC26TY	Electrostatic (ESDA)	The letters "LL" appear in the middle of the page (K1) and when I compared found that they are similar to that of the word "WILL" on the document in question (Q)
VC26TY	Comparison techniques	I compared Q1 to the first torn page of K1 and found similarities in the torn edges of both.
VF2DYU	Using Sidelight & oblique light	We see intended writing simulate to the sentence "I will kill you". [sic]
VF2DYU	Using microscope	We see black ink in the end of the threading[sic] note q1 which similar to black mark in notepad k1
VLMCP3	Digital Microscope	Observation of macro and micro characteristics of Q1 with torn edges of the notebook. Measured lines, space, height and width of paper
VLMCP3	Side light	Looked for indented writing, watermarks.
VLMCP3	Alternate Light sources	Examined fibers within the Q1 specimen and compared to the known sheets of torn paper to see if any fibers crossed over and could be matched.
VM3WTR	macroscopic	Basic measurements of K1 and Q1 paper (length, width, margins, line spacing) and distance of black marker/sharpie from bottom right corner or[sic] paper - found to be consistent. Noted pages missing from K1 - three pages torn out of notebook leaving remnants in K1. Noted Q1 has torn appearance on left side
VM3WTR	microscopic	Examination of the three paper remnants from K1 to the torn edge on Q1 for a possible fracture match. Found one of the paper remnants from K1 matches the tear pattern on Q1

TABLE 2

WebCode	Methods/Techniques	Observations
VM3WTR	indented writing (oblique and ESDA)	No visible indentations on Q1 or on first remaining page in K1 after the missing pages, some indentations noted below this page. Processed front and back of Q1 for indented writing with ESDA (dry and humidified) with no results -processed the front and back of the first remaining page in K1 after the missing pages with ESDA (dry and humidified) with positive results - the indentations are consistent with the note in Q1
VM3WTR	ink examination (VSC-various light sources and setting)	Used VSC to examine inks on Q1 and K1 (from the first remaining page in K1 after the missing pages) and could not differentiate inks
VM3WTR	paper examination (VSC-various light sources and settings)	Used VSC to examine paper from Q1 and from K1 and could not differentiate papers
VU4M34	Microscopic, magnification, comparison techniques, oblique lighting.	Teal green spiral notebook (Cover is plastic, and backing is cardboard). 5.5" x 4.5". Inside notebook contains three plastic dividers (pink, teal, and blue). Out side bottom edge of notebook contains a black vertical line created by a felt tip pen (location of pen marking, is 3 1/4" from spiral binding). Approx 3/8" thick. Inside: lined white paper. No indented writing was evident on the pages in the notebook with (technique: oblique lighting).
WADVJX	Side-lighting	Oblique lighting applied to notebook page following the missing pages to determine if there is evidence of secondary impressions
WADVJX	ESDA	Development of impressions using the electrostatic detection device which resulted in a positive lift which represented the hand printing of the QD.
WJXUXM	Visual observation	Black mark that is on the bottom right hand side of note "Q1" is similar to the black mark on the note pad "K1".
WJXUXM	Visual Observation	The note pad "K1" was having three missing pages, which indicates that they were cut out from the note pad. The size of the "Q1" note when merged with the missing pages in "K1" is of the same size as the original pages in the note pad.
WJXUXM	Video Spectral Comparator (VSC)	Notepad "K1" had indentation which were observed using right hand side lights
WJXUXM	Electrostatic Detection Apparatus (ESDA)	The indentations observed on the note pad "K1" were lifted using ESDA with visible writing "I WILL KILL YOU" on it
WJXUXM	Video Spectral Comparator (VSC)	The indentation observed from "K1" using VSC were lifted using the ESDA instrument which matched the writing "I WILL KILL YOU" on "Q1". This indicates that the written note "Q1" was part of the removed pages from the note pad marked "K1"
WJXUXM	Video Spectral Comparator (VSC)	The lifted image were compared to the note "Q1". They both had similar characteristics. When superimposed the two document fit in to each other.
WJXUXM	Video Spectral Comparator (VSC)	The writing inks on the two documents were having similar reaction of fading @ 645nm.
WNVLHZ	Visual examination of documents	On the notepad "K1" we notice the existence of a black line on the bottom edge of pages. On the sheet "Q1", there are black visible points corresponding and at the same size than[sic] the line visible on "K1". In the notepad "K1", two missing pages with vertical traces of damage on the whole length.

TABLE 2

WebCode	Methods/Techniques	Observations
WNLVHZ	Examination for indented writing latent marks with "Vacuum Box"	The result of searching for indented writing on pages 1, 2 and 3 of the notepad "K1" was negative. After examination for indented writings, we found corresponding writings between the page 6 of the notepad "K1" and the writings of the sheet "Q1".
WNLVHZ	Examination under high magnification and direct light with VSC 6000	The trace of damage on sheet "Q1" correspond to the one of the first missing page of the notepad "K1".
WPLHTR	macroscopic	K1 is a spiral bound notepad, divided by 3 inserted plastic sheets into 4 sections, sections 3 and 4 have 38 leaves each, section 1 has 34 leaves and 3 stubs, section 2 has 37 leaves, each paper page is ruled. A fibre tip line has been drawn on the mass of the notepad on the bottom edge from plastic top cover to cardboard back. The 3 stubs are between leaves 3 and 4. Leaf 4 has an entry in black ballpoint ink written in (mainly) cursive writing and digits. This is dated as 3/2/15. The 3 stubs are narrower at the top edge than at the bottom edge, the top bottom and 'spine' edges are machine cut, the other edges are torn. Q1 is a ruled leaf with 3 machine cut edges and a torn left hand edge. The paper is not rectangular, the top edge is wider than the bottom edge. The paper height is exactly the same as the paper height of the notepad. The ruling is exactly the same as the notepad. The paper is closely similar in colour and weight as that in the notepad. There is a fibre tip ink mark on the bottom edge of the leaf in the same position as the mark on the notepad. The handwriting on Q1 is in capital letters in black ball point ink.
WPLHTR	Microscopic Examination	There is an exact mechanical fit of the torn edge of Q1 with the torn edge of the top stub in K1. There is not a mechanical fit of the torn edge of Q1 with the torn edge of the middle stub in K1. There is not a mechanical fit of the torn edge of Q1 with the torn edge of the bottom stub in K1.
WPLHTR	Indented writing oblique light	There are indented impressions of the writing of Q1 on the page dated 3/2/15 in K1. They are in very close alignment.
WQYGYH	VSC 6000 Flood light	Physical match of note pad and note was positive.
WQYGYH	VSC 6000 Side light	On the hand written page of the note pad there were indentations.
WQYGYH	ESDA	There were indentations on the hand written[sic] page of the note pad.
WZNT9U	Initial Assessment	Observed indented writing (IW) on page 7 of K1 notebook using side lighting. Examined torn edge of Q1 document. Using microscope to examine the handwriting on Q1 document, noted handwriting was freely and naturally prepared.
WZNT9U	ESDA	ESDA was positive for IW on page 7 of K1 notebook, which overlaid with the handwriting observed on Q1.
WZNT9U	Cut/Torn Edge Comparison	Torn edge fracture of K1 page 4 and Q1 are consistent.
WZNT9U	Video Spectral Analysis - Torn Edge Comp	Using the VSC 6000 was able to observe fluorescing fibers that started in the K1 page 4 and continued into the Q1 page.
X383WL	PHYSICAL EXAMINATION OF THE ROLE	I made the respective analysis of media on paper was verified: The state of conservation (K1) and (Q1), the determination of its overall dimensions (length, width and thickness) and their specific qualities (cut, color, watermark, opacity, surface gloss, stiffness, weight, etc. [sic])

TABLE 2

WebCode	Methods/Techniques	Observations
X383WL	EXAMINATION OF THE EDGES	It was carried out the analysis of the characteristics of those songs or selvages, if they have some stain which is located in the bottom features, the color of the surface of the sheet with the edge, there is uniformity. [sic]
X383WL	GROOVES OR DUCTUS[sic]	Performed the analysis through the comparison video souts[sic] or relief and seen on the surface.
X7KJWX	Microscope	The writing instrument used on "Q1" is a ballpoint pen
X7KJWX	Video Spectra[sic] Comparator (VSC)	Side lights revealed some indentations on the document "K1" that matches the writing on the questioned document "Q1"
X7KJWX	ESDA (Electrostatic Detector Apparatus)	With the use of the ESDA, the analysis has revealed to me the indentations on document "K1" that matches the information or the writing found on the questioned item "Q1"
X8GZ9U	Signaletico[sic] method and scientific method	I used signaletico[sic] method supported by the scientific method comprising the steps: physical observation of the document, indication and marking of hallmarks, found feature comparison and interpretation of results or findings.
X8GZ9U	Direct and indirect optical technique and measurements	Direct (human eye) and indirect optical technique (with the use of optical instruments in good working order such as magnifiers different magnifications, estereomicroscopio, ultraviolet camera and video spectral comparator applied). With different kinds of light (natural, ultraviolet and infrared) in ground position (side), transmitted light and incident light is also applied. Digital measurements were also performed with the software application video spectral comparator. [sic]
X8GZ9U	Physical analysis of fibers and profiling cuts	They were observed, analyzed and compared the fibers that make up the role of the threatening note, of the order sheets of notebook and cuts, establishing correspondences presenting its configuration, thickness and position or location. Observed the profile of each cut notebook and threatening note with the help of software spectral comparison video that I made measurements of the spacing of the cuts, the threatening note and notebook sheets, I found correspondences between notes. The threatenings note was originated from the first cut of the notebook. [sic]
X8GZ9U	Optical analysis of the infrared spectrum and latent written analysis	When the texts of the threatening note and appearing on notebook sheet were exposed to infrared light of 925 nm showed the same absorption behavior. When exposed spellings leaf notebook infrared light at a wavelength of 725 nanometers, using ground or oblique light, the ductus[sic] very similar graphics were observed at the letters I, W, LL, K u Y and appearing in the threatening note.
XGQP4Y	Visual Examination	Positive for Impression
XGQP4Y	Oblique Lighting Exam	Positive for Impressions. Not Identifiable.
XGQP4Y	VSC 6000/HS	Positive for Impressions utilizing various light sources, magnification, Integration, percentage of IRIS and imaged width to identify the impressions on Document Q-1.
XGRKPQ	Microscope (side lighting)	slight indentations observed on page in K1 with handwriting
XGRKPQ	ESDA Q1 & K1	(-) ESDA Q1 (+) ESDA (K1) front of page ESDA observed (+) ESDA (K1) back of pg Q1

TABLE 2

WebCode	Methods/Techniques	Observations
XGRKPQ	VSC	Compare Q1 edge to cut remnants (3) in K1 possible match to 1st remnant in K1
XGRKPQ	ALS (pattern match & cut) fibers match	(+) fracture match Q1 to 1st remnant in K1
XTK44V	Stereo Microscope, Scanner	Tear pattern match between first torn piece in notepad and questioned note.
XTK44V	ESDA, oblique lighting	Impressions developed on pages in notepad match the wording of the questioned note.
XTK44V	UV lighting, Transmitted light, paper thickness guage[sic]	Consistencies observed between Notepad and Note.
XZ3LFH	ESDA test	The latent indented words "I will kill you" become visible on "K1" using the electro static detection apparatus.
XZ3LFH	Microscopy using the VSC 6000	Magnification and incident light illumination was used to observe the torn paper fibres in order to conduct a physical match. The paper fibres from the threatening note marked "Q1" matched the paper fibres from the first torn page of the notepad marked "K1.1" by the examiner.
XZ3LFH	VSC 6000 light sources	Side lighting was used for the detection of indentations.
XZ3LFH	VSC 6000	Using the method of super imposing an image for matching of the indentations and the original writing. The image from the results of the ESDA test conducted on "K1" ("I WILL KILL YOU") was super imposed on the image of "Q1" ("I WILL KILL YOU")
XZ3LFH	Microscopy using VSC 6000	A black ink mark was observed at the bottom of "Q1". The placement and size of the black ink mark at the bottom of "Q1" corresponds/matches the black line drawn at the bottom outside of the notepad marked "K1".
Y69E8T	Microscopic	Comparison of fracture edges
Y69E8T	Fracture edge comparison	Scan & enlarge - side by side comparison
Y69E8T	ESDA	impressions found matching writing on Q1.
Y69E8T	Photographs	Close up fracture edges
Y69E8T	Visual Exam	Black edge mark found in relative position for Q1 & K1
Y69E8T	measurements w/ micrometer	Approximately .003 for Q1 and K1 paper consistent between the two
YEUTUV	Oblique light/grazing light	Some characters of the threatening note are weakly visible on the first page after the removed sheets.
YEUTUV	Traces of separating	The edge line of the questioned note matches the edge line of the remnants of the first removed sheet perfectly.
YEUTUV	Collation marks	The collation mark of the questioned note fits to the mark of the notepad.
YEUTUV	Electrostatic detection of indented writings	Indented lines of the writing "I WILL KILL YOU" were detected on the first page after the removed sheets.
YEUTUV	Transmitted light	The questioned note showed some cloudiness and color as the paper of the notepad.



TABLE 2

WebCode	Methods/Techniques	Observations
YEUTUV	Spectroscopic analysis (IR, UV)	The ink entries of the questioned note and the note remaining in the notepad showed same behavior concerning IR luminescence and IR remission as well as UV luminescence.
YEUTUV	Paper thickness measuring	No significant differences in paper thickness
YK4WWQ	UV - Optical brightness	LW and SW UV light was used to determine if the Q note conformed in its optical brightness with the torn pages in the notebook. It did.
YK4WWQ	Paper fracture match	The page in question had a paper fracture match with the first torn page remnant in the notebook.
YK4WWQ	Indented writing.	The questioned writing was indented onto the page with the handwritten text, "3/2/15 Math: #1-25...". The indentations, "I WILL KILL YOU" aligned with the questioned writing.
YMQ6XY	Microscopic Comparison	Examined edges of torn page
YMQ6XY	Comparison	Compared torn edges on pages 4, 5 & 6. Page 4 was torn & used to create threatening note.
YMQ6XY	Indented writing	Indented writing was faint.
YMQ6XY	Oblique Lighting	Using oblique lighting, the letter "U" and part of "I" "W" observed
YMQ6XY	Visual	Using magnifying glass examined black-on bottom vertical line 1" from right side of book.
YMQ6XY	UV/IR	Compare inks - note to page 7 w/ writing appears to flouress[sic] the same
YMQ6XY	Ink Comparison	Appear to be similar
YN3924	Indentation via sidelight	K1 revealed what could be the word "WILL", Q1 had no indentations
YN3924	Indentation via ESDA	Q1 - no indentations, K1 had indentations, "I WILL KILL YOU" from writing on Q1
YN3924	Paper fiber microscopic	Matching paper fibers were discovered between Q1 & one of the three strips of paper left in K1.
YN3924	Paper fiber microscopic UV	Matching paper fibers were discovered under, UV light, between Q1 & the same strip of paper left in K1.
YN3924	Visual	Black ink line, drawer perpendicular to the sheets of paper, found at bottom rt. of K1. This black line matches with the black ink dot found at bottom rt of Q1.
YWZXKT	Microscopic Analysis (Microscope/VSC6000)	Analysis of paper fibers on paper edges.
YWZXKT	Indented writing (oblique lighting/ESDA)	Analysis of indentations and charge differences.
YWZXKT	Alternate Lighting Using VSC 6000	Analysis of paper fibers on paper edges.
YZF8CK	Microscopy with the VSC 6000	For magnification to observe the torn paper fibres using incident light illumination. Edge of the note marked as "Q1" was aligned with the edges of the remains marked "K1b" to "K1d" and physically matched the piece of the torn page marked as "K1b".

TABLE 2

WebCode	Methods/Techniques	Observations
YZF8CK	Microscopy with the VSC 6000	For magnification to observe the torn paper fibres using incident light illumination. The bottom part of the "note" marked as "Q1" was aligned with the bottom part of the page marked as "K1a" and physically matched the ink offset.
YZF8CK	Electrostatic detection with the ESDA 2	For detection of indentations on the page "K1a". Indentations of the words "I WILL KILL YOU" were observed on the page marked as "K1a".
YZF8CK	An examination using side (oblique) lighting	For detection of indentations. Results were not very good. Very little indentations were observed.
Z2MKXR	STEREOMICROSCOPE	Increases above the 10 x, matched irregular cuts in their deltas and depressions, despite the cutting instrument dragged portion of the fibers in some areas.
Z2MKXR	COMPARISON OF VIDEO - VSC6000	Analysis obverse and reverse printing features horizontal lines of the sheet, the caliber and continuity in different tones, print quality and minor key edge.
Z2MKXR	VSC6000 - MONOCHROME PICTURE LIGH[sic]	Shared on both sides of the sheet fibrils major key, extension, size areas. [sic]
Z2MKXR	VSC6000 - INCIDENTAL WHITE LIGHT	Pollution printing small dots seen in upper area of some horizontal lines and keep continuity on both sides of the sheet.
Z2MKXR	VSC6000 - right and left oblique light	Ductus or faint indentation especially straight lines full of writing threatening, location and size agree with leaf text "02/03/15".
Z2MKXR	SPOTLIGHT	Although not conclusive, the trademark of the lower edge with black marker notebook coincides with the dubitada sheet.[sic]
Z2Q4KV	Microscopic physical match	The 4th and the 5th page in the notebook was torn from the book. The "stub" of the 4th page remaining in the book is a physical match between the stub and the questioned note.
Z2Q4KV	Visual analysis of the page	The pages in the notepad are marked with a black pen of which the ink penetrated the paper. A similar mark appear on the questioned note which correspond in placement with the mark on the notebook. The size and design of the paper correspond with the size and design of the notebook's.
Z2Q4KV	Indentation test	ESDA test revealed the wording I WILL KILL YOU on page 6 of the notebook which matches exactly the wording on the questioned note.
Z2Q4KV	UV and IR lighting techniques	The paper of the notebook and questioned note correspond as both react similar under UV and IR lighting techniques. A paper fiber that luminescence was torn and parts thereof can be observed on both the notebook stub and the questioned note.
Z4BGGX	Macroscopic	Black ink mark on lower right corner of Q1 corresponds in general position with black ink line running down pages of K1. There are three torn page stubs occupying page positions 4, 5 & 6 in K1.
Z4BGGX	Indentations (ESDA/Oblique light)	Indentations of the text from the questioned note (Q1) were located on page 7 of K1.
Z4BGGX	Microscopic	Common tear pattern characteristics between the left edge of Q1 and the torn edge of the stub of page 4 in K1. Also matching severed fibres located across the tear.
Z4BGGX	Infrared Luminescence & Ultraviolet fluorescence	Severed fibres match across tear between Q1 and K1.4

TABLE 2

WebCode	Methods/Techniques	Observations
Z62GZ9	VSC 6000, using flood light	Physical match was done between "Q1" and "K1". "Q1" originate from "K1"
Z62GZ9	ESDA	Indentations were found on document marked "K1"
Z7J9EY	general observations	similar dimensions, ruled lines Q01 v K01 black mark on bottom of page Q01 similar to others in notebook
Z7J9EY	microscopy	physical fit observed (transmitted light shows areas of corresponding determination)
Z7J9EY	scanning/comparison	physical fit observed
Z7J9EY	oblique lighting	faint impressions of note Q01 on page 3/2/15 in K01
Z8QNJK	VSC (Intergration[sic] of lights)	The physical torn document as a threatening note (Q1) from the Notepad (K1) matching with all the paper fibers to each other.
Z8QNJK	ESDA	Enhancement of pressure exerted on the threatening note (Q1) that caused indentations of the Notepad.
Z8QNJK	VSC (Intergration[sic] of lights)	Enhancement of the Question writing from the ESDA, and print it for presenting it as a demonstration for court purposes.
ZBUGGP	Examine fracture pattern of Q1 vs stubs left in notebook	Three pages were removed from the notebook. The stub for the 1st of those three pages shows the page was torn free at the last quarter inch of the sheet. The torn stub fits the torn section on Q1
ZBUGGP	Indented writing examination on third following page	The 1st remaining page (following the three stubs in Q1 [sic]) shows at least partial indented images of entires[sic] on Q1
ZF6X7Y	Side-Lighting/Oblique Lighting	Exhibit Q1 did not have any visible indentations. Exhibit K1 (pages 7-9) did have visible indentations.
ZF6X7Y	Electrostatic Detection (ESDA)	Results were negative with respect to handwriting indentations on Exhibit Q1. Results were positive with respect to handwriting indentations on Exhibit K1 (pages 7-10). The indentations found on Exhibit K1 (7) originated from the questioned handwriting on Exhibit Q1.
ZF6X7Y	Alternate Light Sources (VSC)	Writing ink, paper, and printed margin lines of Exhibit Q1 are similar to that found on Exhibit K1 (page 7). A similar, small black marking was noted on Exhibit Q1 and several pages of Exhibit K1.
ZF6X7Y	Microscopic/Macroscopic/Fracture Match	Exhibit Q1 was once joined to form a single piece of paper with Exhibit K1 page 4 (torn remnant of paper found in notebook - Exhibit K1)
ZF6X7Y	Handwriting Examination	The questioned handwritten entries on Exhibit Q1 appear to be naturally written and contain some identifiable handwriting characteristics, though, they may not be sufficient for comparison with a known writer
ZF6X7Y	Digital Scan	Exhibit Q1, K1 (pages 1-10) and the original ESDA lifts were digitally scanned and a CD of the digital images will be retained.
ZQRWYP	Microscopic analysis of ink and oblique light	Indented writing observed on K1 pages 7 and 8, black mark on bottom of Q1 and K1, printing characteristic on back of Q1 and K1 pages, torn left edge of Q1, black ballpoint, torn/missing pages 4, 5, and 6 from K1.
ZQRWYP	Electrostatic Detection Apparatus	Indented writing recovered from K1 pages 7 and 8 and correspond/overlay with the original writing on Q1.

TABLE 2

WebCode	Methods/Techniques	Observations
ZQRWYP	Video Spectral Comparator, transmitted light	Q1 was at one time attached to K1 page 4, fracture pattern, feathering, and fiber crossing correspondence.
ZXPN3C	ESDA (electrostatic)	Developed writing impressions of similar text to item Q1 on page in item K1
ZXPN3C	Visual Overlay	Overlaid ESDA result of K1 & Q1, writing/impressions and lines match
ZXPN3C	Physical Match	Microscopic examination, cut/torn edge of Q1 physically fits 1st stub of cut paper in K1
ZXPN3C	Visual Observation	Black ink dot on edge Q1 alignes[sic] in similar relative position to those in K1

# Conclusions

## TABLE 3

WebCode	Conclusions
23GPRR	The piece of sheet on which the text rests threatening "I WILL KILL YOU", comes from the first blade segment located in the notebook provided for documentológico[sic] analysis. Similarly, the inks with which the threat note "I WILL KILL YOU" is performed corresponds to the same ink with which the manuscripts found in the notebook be developed.
247VA3	Based on the aforementioned observations, I came to the conclusion that item "Q1" originated from the notepad "K1" with indentations of the message "I WILL KILL YOU".
2B8TRK	The sheet (NOTE) of the threat for doubt, if it comes from the book belonging to the undoubted material.
2VUKPV	The handwritten letter, 001-A1, came from the blue covered note pad, 001-A2.
32H4DQ	The questioned note (Q1) originated from the recovered notepad (K1).
3788B2	Results and Conclusions: The note and pad were examined visually, microscopically, with the aid of a Video Spectral Comparator, with the aid of a scanner and image editing software, and were processed for indented writing using an electro static detection apparatus. Significant similarities were observed in the paper and a line of black ink on the bottom face of the notebook. The words "I Will Kill You" were developed on the front and back of the first page after the missing pages in the note pad. The questioned note, Item Q-1, was once part of the known note pad, Item K-1.
3BLNMR	The questioned note originated from the recovered notepad.
3JXF2B	After examination I made the following observations: Indented writing "I will kill" found on the note marked as "Q1" was also found on the note pad marked as "K1". The physical match between the edge of the threatening note marked as "Q1" and the left margin inside the note pad marked as "K1" have been observed. In the light of the above mentioned observations I reached the conclusion that the questioned note marked as "Q1" originated from the note pad marked as "K1".
3QYV74	The questioned note originated from the exemplar notebook.
3ZLNZU	The evidences provides strong support for the proposition that the questioned note (Q) originated from the recovered note pad (K1). The contents, font and design of the writing is identical to that found on the document in question. Indentations of the writing can be clearly identified which read "I WILL KILL YOU" in the note pad in question. The ink used to write in the note pad and questioned document is very similar.
428R77	After examination and comparison of exhibit material marked "Q1" with exhibit material marked "K1.1", "K1.2", "K1.3" and "K1.4", I reached the conclusion that paper fragments marked "Q1" originated from note pad marked "K1". Paper fragments marked "Q1" and "K1.1" were at one time joined to form a single piece of paper.
42GUCY	Indented impressions were observed on the page following the cutted pages of the notepad. The visualised impressions were found to equal the pen written text on the questioned note. Ink traces caused by a pen stroke were observed on the edges of the pages of the notepad. Ink trace originating from the same pen or pen containing similar ink was observed on the questioned note. A good physical fit of the cutting edge between the questioned note and the first cutted page of the notepad was observed. The aforementioned observations indicate that the questioned note originated from the recovered notepad. [sic]
46TYNY	Various microscopic, infrared, and ultraviolet examinations were conducted on the Q1 and K1-4 documents. These examinations revealed that the paper exhibits similar class characteristics, such as color, hue, and response to ultraviolet and infrared light sources. On the basis of the examinations conducted, it is my opinion that the torn/cut edges of Q1 and K1-4 were at one time joined to form a

## TABLE 3

WebCode	Conclusions
	single document. The Q1 document and the K1 notebook were examined for the presence of any indented writing, typing or other identifying impressions. These are impressions sometimes left on paper from writing, typing, or other markings done on another page while it was superimposed over the questioned material. The following impressions were located in pages K1-7, K1-8 and K1-9 of the K1 notebook, sourced to the original writing on the Q1 document and reads: "I WILL KILL YOU". The resulting ESDA lifts (electrograph/imaging film) are being returned. The questioned writing on Q1 can neither be identified, nor eliminated with the known writing on K1-7. The questioned writing and the known writing do not consist of the same uppercase/lowercase letters or letters combinations and are not comparable.
4GLXH6	I found the evidence to support the proposition that the "threatening note" marked as "Q1" did originate from the note pad marked as "K1".
4L4LAA	Item Q1 was once attached to the top partial piece of paper in item K1. The K1 page bearing a handwritten entry was processed for indented writing. The handwritten message on item Q1 ("I Will Kill You") was developed as indented writing on this page of item K1.
4MCAG8	3.1 After examination of the disputed [sic] marked as "Q1" and specimen material marked as "K1" I made the following observations. 3.1.1 There is a physical match between the disputed note and the left edges of removed pages in the note pad. 3.1.2 The indentations of the note in Question, "I will kill you" appears on the page of the note pad "K1". In light of the above mentioned observations I reached the conclusions that the questioned note originated from the recovered note pad.
4QC7X8	It is my opinion that the evidence provides very strong support for the proposition that the questioned note, item Q1, originated from the notepad, item K1.
4RLVGJ	The Q1 threatening note was torn from the K1 notebook. Latent handwriting examinations using the ESDA ("Electrostatic Detection Apparatus") revealed that the visible threatening handwritten message "I WILL KILL YOU" was endented[sic] onto the sheet of paper still attached in the K1 notebook bearing the visible handwriting of "3/2/15 Math: #1-25 #30-35 English: p. 16-88 worksheet".
4TGG8P	The questioned note with the threatening text was the part of the recovered notepad.
4U96E7	After examination and comparison I reached the conclusion that there is strong probability that the questioned note originated from from[sic] the recovered notepad.
699PPN	Indentations from the Q1 note were found in the K1 notebook. Additionally, the Q1 note was at one time attached to one of the cut pieces in the K1 notebook. Based on these characteristics, and others, it was determined that the Item Q1 hand printed note originated from the item K1 notebook.
6BXXW4	Q1 was originally part of K1.
6CBREP	An examination was performed on Q1 showing a hand printed message "I WILL KILL YOU" in black ink. Q1 is a lined piece of paper (Approx. 3.5" wide & 5.5" height) with marks on the left side to indicate it was torn from a notepad. On the reverse side of Q1 numerous pen pressure marks were noticed from the hand printed message on front of the document. While examining K1 pages 4, 5 and 6 down from the front were all torn out of the notepad. K1 (Approx. 5" wide and 5.5" height) had a hand printed message on the 7th page down from the front. The message starts with "3/2/15" and ends with "worksheet". Rest of the notepad is blank with no further writings. When examining K1 for indented impressions, I noticed numerous indented letters on the 7th page down from the front with each letter being approximately 2 notepad lines in height. When comparing the indented impressions on K1 to the hand printed message on Q1, I have determined that the questioned note was written[sic] on top of page 7 of the recovered notepad.
6D279N	In conclusion : The question mark (Q1) originated from the notebook (K1) recovered, sent as a standard of comparison.
6D7PVQ	Based on the aforementioned observations, I came to the conclusion that the note ("I WILL KILL YOU"),

## TABLE 3

WebCode	Conclusions
	originated from the note pad in question.
6GHV8R	The evidence provides strong support for the proposition that the note in question (Q) originated from the note book (K1).
6LX6JA	The questioned note ("Q1") originated from the note pad "K1". My results are based on the following observations: 1. The questioned note "Q1" physically matches with the remaining part (left margin) of the first torn off note from the note pad "K1". 2. Both substrates of "Q1" and "K1" physically look the same. 3. Indented writing of words "I WILL KILL YOU" written on "Q1" was observed on the note pad "K1".
6R323A	The questioned threatening note marked "Q1" originate from the notepad marked "K1". Physical match correspond due to the match of fibres torn between the papers. There are indentations that indicates that the threatening note originate from the notepad. The black line on the edges of the pages of document marked "Q1" form a continuous line with that of the document marked "K1" indicating that is[sic] it was written with the same writing instrument.
73HWRE	The questioned note was originated from the recovered notepad.
74DGJK	It was determined that the Q1 document originated from the K1 notebook.
7A22MZ	The questioned note, Q1 originated from K1.
7LFYUP	In our opinion, the questioned note has been separated from notepad recovered from one of the suspected students.
7QMM8Q	The wording of the Conclusions in my report: The sentence "I WILL KILL YOU" on a sample Q1 coresponds[sic] to the punch holes on the K1 therefore it comes from this notepad; Elements shaped edge of the sample Q1 coresponds[sic] to shaped paper fragment in notepad; The transparencies of Q1 and paper from K1 are the same; The thickness of Q1 and one page from K1 are the same; Special paper element like bright/light line on the Q1 and notepad page are situated in this same place; Ink of ballpoint pen, which there[sic] was used to write "I WILL KILL YOU" on a sample Q1 and the note in K1 (notepad) is the same.
7VEUPY	The Q1 document was, at one time, bound into the K1 notebook.
7VZBYA	The questioned note originated from the recovered notepad. The questioned note originated from the notepad 4.page.
7ZCQKE	Physical, optical, and chemical examinations were conducted on representative samples of Exhibits Q1 and K1. Based on these examinations, including a microscopic comparison of the paper fibers, it was determined that Exhibit Q1 was originally a part of Exhibit K1-P4 (page four in Exhibit K1).
83HYFX	On examination of the threatening note Q1, I have found that it originated from the notepad K1. Indications leading me to this conclusion include a physical match that I found between the torn edge of the note Q1 and the stub of the fourth page in the notepad K1, as well as remnants of indented writing originating in Q1 that were found on the seventh page of the notepad K1. Furthermore, I have found a match between the location of the ink stain on the bottom edge of the note Q1 and the ink stains on the bottom edge of the pages of the notepad K1.
87WBZZ	After an examination and comparison of the respective material, I reached the conclusion that the questioned note originated from the recovered note pad.
89YR7M	No differences between Q1 and K1 could be detected in any of the technical examinations done on the paper-substrate. In addition the indented handwritten text "I WILL KILL YOU" is congruent in all details with the handwritten text "I WILL KILL YOU" on a page in K1. Therefore the questioned note (Q1) originated from the recovered notepad ( K1) ( Answer "A").
8B8J4P	In conclusion the questioned note page originated (taken) from the recovered notepad.

TABLE 3

WebCode	Conclusions
8E3ACM	Overall, my observations lead me conclude that the note, item Q1, is written on paper that was a leaf in the notepad, item K1, and that it was written while resting on other leaves bound sequentially in the notepad and, almost certainly, it was bound in the notepad when it was written. The stub in the notepad immediately after the current third leaf resulted from the note being removed from that position.
8FLW7X	From my observations I could conclude that: Edges of "K1" and "Q1" physically match. When you bring you bring the edges of "K1" and "Q1" close together they physically match.[sic] This a clear indication that the questioned note marked "Q1" originated from recovered note-pad marked "K1".
8P3BXJ	The note (Q1), bearing handwriting, previously formed part of the notepad (K1). The handwriting on the note was written whilst this piece of paper was resting on the relevant page of the notepad.
8RV4XA	It is my opinion Q-1, the piece of paper containing the questioned note, and the 1st partial page in K-1 (notepad) were at one time one piece of paper. Also, it is my opinion the impressions on the 4th full page in K-1 (notepad) were created as a result of Q-1 being above this page when the information was written on Q-1. Therefore, it is my opinion Q-1 originated from K-1 (notepad).
8WBRFK	The results of the document examination indicate that the handwritten threatening note (Q1) does originate from this notepad (K1). Basic evidence for this is: Coincidence of the lines, distance and width of the lines. Coincidence of the black mark on the lower edge of the note and the markings on the pages of the notepad. Coincidence of the markings of the manufacturers cutting knife on the paper edges. Faint impressions on the page in the notebook with the handwriting "2/2/15[sic] Math:#1-25 #30-35 English: p. 16-88 worksheet" that fit with the positioning of the handwriting on Q1. Coincidence of the traces on the edges of the threatening note Q1 and the upper paper fragment in the notepad. (by tearing the paper apart)
9HMLNX	After examination of the notepad (K1) and the questioned note (Q1) I found that the note (Q1) originated from the notepad (K1). The determination was reached due to the physical matching of the notepad (K1) and the note (Q1), indentations of writing on the note (Q1) found on a succeeding page of the notepad (K1) and similar marking left by a writing instrument (assumed to be a marking pen) on all pages of the notepad (K1) is also present on the note (Q1).
9L3UAB	After examination and comparison I reached the conclusion that the threatening note originated from the recovered notepad, under the instruments ESDA2 and VSC6000- light sources. The edges of the threatening note and notepad physically match, confirming that "Q1" was removed from "K1". The threatening note "Q1" and torn part of the notepad "K1" are both UV bright proving that they are from the same source. The writings "I WILL KILL YOU" found on the threatening note "Q1" are also found as indentations on the notepad "K1" and fit perfectly on each other when superimposed.
9LK33C	The questioned note (Q1)is ORIGINATED from the recovered notepad (K1)
9T24DZ	An indented impression examination was conducted on the Q1 note and page 4 in the K1 notebook, as a visual examination indicated that there were no other stubs in the notebook in K1. Indented impressions, generally, are left on a sheet of paper which has been in contact with another document during the writing process. Indented impressions are subject to more than one interpretation. Q1: No decipherable indented impressions developed on the note. K1, page 4: The following indented impressions developed on the lifts from page 4 in the K1 notebook: "I WILL KILL YOU". These indented impressions are from the writing on the Q1 document, which means that the note in Q1 was in contact with page 4 in the K1 notebook during the act of writing. Additionally, the torn edge on the Q1 note was compared to the torn edges on the three stubs in the K1 notebook. The stubs were labeled a, b, and c in order as they were in the notebook. The Q1 note and K1 notebook share the following class characteristics: white paper with visible yellow fibers throughout; approximately 5 7/16" high; printed grey, horizontal lines spaced approximately 9/32" apart; and a spot of black ink along the bottom edge of the page, approximately 1" from the right edge. Furthermore upon microscopic examination, it was determined that the Q1 note was at one time connected to stub labeled 'a' from the K1 notebook and the Q1 note was not connected to stubs b or c.
A6QX8N	Based on the results of the investigation we can conclude, that the text "I WILL KILL YOU", on Q1 was



TABLE 3

WebCode	Conclusions
	written in the notepad K1. After that the sheet of paper with threat and two next sheets of paper in the notepad were torn out from the notepad.
AA6BBW	After examination I made the following observations: The writing found on the threatening note was also found as indentations on the note pad, indentations were observed from ESDA. Physical match of the threatening note and note pad at the edge of the left margin. In light of the above mentioned observations I reached the conclusion that the questioned note marked as Q1 originated from the note pad marked as K1.
AGAKQH	Several documents (Q1, K1-4, K1-5 and K1-6) were examined for impressions of indented writing. Indentations of this sort often occur on a document when writing is performed on another document that is physically on top of it. The writing "I WILL KILL YOU" on Q1 left indentations on pages K1-4 and K1-5 (the latter, very faint). This indicates that when this writing was done Q1 was on top of K1-4 and K1-5. The writing beginning "3/2/15..." on K1-4 left indentations on pages K1-5 and K1-6 (the latter, very faint). The torn edge of Q1 was compared against the torn edges of stubs K1-1, K1-2 and K1-3. A positive fracture match was found between Q1 and K1-1, indicating that they were at one time connected.
AGQN9G	It was determined that the item Q1 piece of paper was at one time attached to the item K1 page 4 strip of paper. Indented writing was observed on item K1 page 7, using the Electrostatic Detection Apparatus (ESDA), which is consistent with the questioned writing on item Q1.
AYK2L3	3. The questioned note "Q1" originated from the recovered notepad "K1". 3.1 The indented impression that look like a shadowgraph reading "I WILL KILL YOU" was observed from notepad "K1". 3.2 The indentation text reading "I WILL KILL YOU" was deciphered from notepad "K1". 3.3 The questioned note "Q1" handwriting and deciphered text from the notepad "K1" have the similar individual handwriting characteristics and are identical. 3.4 There is an indication that three pages were cut off from the notepad "Q1". 3.5 Edge-to-edge realignment between questioned note "Q1" and remaining pieces of cut pages revealed that the fractures and surface marking of questioned note "Q1" matches the fractures and surface marking on one of the portion of paper left from papers removed from notepad "K1".
B2TFT9	The examination resulted in the following findings: 3.1 The threatening note 'item Q1' have originated from the note pad 'item K1' recovered from one of the suspect student. 3.1.1 There is a physical match between 'item Q1' and one of the pages removed from 'item K1'. 3.1.2 There were also impressions writing on 'item K1' that show 'item Q1' was written on top of 'item K1' when removed. The indentations writing 'I WILL KILL YOU' appears on 'item K1' which is the same as the wording on the threatening note 'item Q1'.
B7L2VA	The threatening note (Q1) originated from the recovered notepad (K1); the quality and conditions of the paper in both analyzed elements are identical.
BD4DNG	My examination based on the observations from the five methods and techniques as stated in item 2 above, I am of the opinion that the questioned note (Q1) was originated from the recovered notepad.
BHUH78	Analysis and comparison of the respective material presented me with the following observations and conclusions: 6.1 After physical match was performed with the note pad mentioned in paragraph 3.2 and note mentioned in paragraph 3.1 I found the note originate from the note pad. 6.2 The indentation of the writing "I WILL KILL YOU" that originated from the note mentioned in paragraph 3.1 appears on the page of the note pad marked "K1d" by me.
BJ9CY8	After examination and comparison of the respective material. I reached the conclusion that the questioned note marked "Q1" originated from the recovered notepad marked "K1", in respect of the physical match, EDSA[sic] indentation, side light and the superimposed.
BPXUDH	As a result of my comparison and examination, I determined that item Q1 was attached to the first remaining torn note page of K1. Therefore, item Q1 originated form[sic] K1.
BVHH2F	After the analyzes, it was found that the observed vertical cut on the left side of the sheet of doubt, completely matches the characteristics of the superior court observed in the notebook tab, likewise view

## TABLE 3

WebCode	Conclusions
	the ink mark on the lower end right in doubt sheet coincides with the location of stroke observed at the base of the notebook.[sic] latent prints and the pressure generated by typing the word (i will) in the handwritten notepad sheet coincide with the dimension structure and location of the text in question sheet. The above observations support the conclusion that the note in question originated in the notebook recovered.
C7GZ7U	The questioned note originated from the questioned notepad, Exhibit 1 (K1). Exhibit 1 (K1) was processed for the presence of indented writing. Indented writing was found. The questioned handwritten entry on Exhibit 2(Q1) was the source of the indented writing found on Exhibit 1 (K1).
C8QMM3	After an examination I found that the note found on the victim's car with the words I WILL KILL YOU originates from the notepad recovered from one of the suspected students. The conclusion was based on the following: 1. The edges on the left margin of the note matches with those of the torn page in the notepad. 2. Indentations of the words "I will kill you" were observed on some of the pages in the notepad.
CAVDUG	Based on the examination findings, I am of the opinion that the first torn paper in K1 (fourth page in K1) and Q1 were at one time joined to form a single piece of paper. Therefore, the questioned note Q1 originated from the recovered notepad K1.
CAWHHJ	Within the specimen notebook (K1), three page stubs were located at page positions 4,5 and 6. Evidence of latent impressions recovered from the page 7 position within K1 provides very strong support for the proposition that the Q1 note was written while positioned in the K1 notebook. Evidence of a tear pattern match between Q1 and page stub position 4, in the K1 notebook, provides very strong support for the proposition that the Q1 note originated from the K1 notebook. Together, these two sources of evidence support a conclusion that the Q1 note originated from and was written while within the K1 notebook.
CCPLWC	There was very strong evidence to support the proposition that Q1 originated from the notepad
CDZ4FG	The questioned note, Q1, originated from the notepad, K1.
CJPTRE	The questioned note PROBABLY ORIGINATED from the recovered notepad.
CLRURC	The threatening note (Q1) originated from the notepad (K1). Specifically, the notepad contains three intact pages leading into the notepad, followed by three removed pages, followed by another intact page with numerals and hand printing: "3/2/15 Math: #1-25..." The three removed pages appear to have been removed by means of a straight edge placed against the pages and torn (as opposed to being cut with a sharp-edged instrument). Of the three removed pages, left side page remnants remain affixed the notepad's spiral wire binding. Q1 was once part of the topmost page remnant. Both that remnant and Q1 mechanically fit precisely. The exactness of the mechanical fit was readily apparent by means of stereoscopic magnification. Both Q1 and writing in the notepad were black, ballpoint ink. The hand printing on Q1, "I WILL KILL YOU" is indented onto the intact page with numerals and hand printing (cf. above), which following the three removed pages. Furthermore, by means of oblique lighting and electrostatic imaging, latent writing indentations from Q1 are also visible on the intact page with numerals and hand printing, and the two pages below that page.
CT4767	1. Item Q1 was torn out of Item K1. 2. Handwriting indentations from the writing on Item Q1 was found on a page of Item K1. 3. Various physical properties of Item Q1 were matched to Item K1. No significant differences were found.
CWU3FN	The questioned note (Item Q1) originated from the Item K1 notepad. Supporting examination documentation is maintained in the case file.
CZDWJG	Indented writing "I WILL KILL YOU" was observed during the examination of K1. It was determined that the Q1 threatening note originated from the K1 notepad. Torn/cut edge characteristics in agreement were observed during the examination of K1 (portion of page 4) and Q1, indicating these items were at one time attached.

TABLE 3

WebCode	Conclusions
CZV78B	Lab item #1 (K1d) and Lab item #2 (Q1) were at one time joined together. Lab item #1 K1g (front and back) and K1h (front and back) were processed for the presence of indented impressions utilizing oblique/side lighting and ESDA (Electrostatic Detection Apparatus). Multiple impressions were found. Image of K1g front was used for reporting purposes. Lab item #1 K1a-c (front and back) and K1i (front and back) were processed for the presence of indented impressions utilizing oblique/side lighting and ESDA. No impressions of investigative value were found. Lab item #2 Q1 (front and back) was processed for the presence of indented impressions utilizing oblique/side lighting and ESDA. No impressions of investigative value were found. Lab item #2 Q1 was searched through the current Criminal Letter Database of the Police Laboratory's Questioned Documents Unit. This evidence (Q1) can not be associated with any previously submitted case.
D4A8PZ	The questioned note ORIGINATED from the recovered notepad.
DBQJ42	The results of the examination extremely strongly support that the note Q1 came from the notepad K1 (Level +4).
DDXWPA	Exhibit Q1 originated from Exhibit K1. This finding was made evident by the following: Indented writing was developed on the front and reverse sides of the seventh page from the front of K1 and was sourced to the writing appearing on Q1. A fracture match was made between the torn left edge of Q1 and the torn right edge of the fourth page from the front of K1. A marking was observed along the bottom edge of Q1 consistent with a marking appearing along the bottom edges of the pages in K1.
DHA4QD	Results of Examinations: It was determined that the Item Q1 questioned note was at one time attached to the Item K1 notepad.
DHNDV8	It has been concluded, that the questioned note Q1, originated from the specimen notepad, K1.
DJJYLD	The questioned note ORIGINATED from the recovered notepad.
DJYDXU	Exhibit 2 (questioned note) originated from Exhibit 1 (notepad).
DM2B9M	Results of Indented Impressions Examinations: Side Light Examinations: Side light examinations of page 7, 8 and 9 of Item 1 revealed faint indented impressions consistent with the writing produced on Item 2 that reads I WILL KILL YOU. Side light examinations of page 1, 2, and 3 of Item 1 failed to reveal any indented impressions. Side light examinations of Item 2 failed to reveal any indented impressions. Electrostatic Detection Apparatus (ESDA) Examinations: ESDA examinations of pages 8 and 9 of Item 1 revealed indented impressions that were caused when the writing was produced on the notebook page submitted as Item 2 that reads I WILL KILL YOU. ESDA examinations of pages 8 and 9 of Item 1 also revealed indented impressions that were caused when the writing was produced on page 7 of the Item 1 spiral notebook. Comments: This means Item 2 (Q) was above pages 7, 8 and 9 of Item 1 when the writing was produced on Item 2. Indented writing impressions can occur when paper is stacked or padded together and writing occurs on the top sheet(s) which leaves an indented writing impression on the sheet(s) below it. Documentation of the lifted impressions along with copies and interpretations of the impressions will be retained with the evidence. Results of Alternate Light Source and Microscopic Examinations: Black Felt Ink Mark Examinations: The black felt ink marks in the right lower corner on pages 1, 2, 3, 7, 8, and 9 of Item 1 and on Item 2 are approximately in the same locations. The black felt ink marks on pages 1, 2, 3, 7, 8, and 9 of Item 1 (K) and on Item 2 (Q) were examined microscopically and using the alternate light sources and filters. These examinations failed to reveal any differences between the black felt ink marks on Item 1 (K) and the black felt ink mark on Item 2 (Q). Limitations: This means that the black felt ink used to produce the questioned marks on Item 2 could have been produced with the same ink that was used to produce the marks on Item 1. However, it could have also been produced with ink that has similar properties thus making it appear similar when examined with a microscope and/or with various light sources. Paper Tear Comparison: Microscopic comparisons between the tear pattern present on the left torn edge of Item 2 and the tear pattern present on the right torn edge of partial page 4 of Item 1 form a physical match. Paper Fiber Examination: Paper edge comparisons between the left torn edge of Item 2 and the right torn edge of partial page 4

## TABLE 3

WebCode	Conclusions
	<p>of Item 1 revealed multiple partial fibers that were once single fibers between the two edges. The results of the paper tear comparison and the paper fiber examination reveal Item 2 and partial page 4 of Item 1 were once a single piece of paper and because the partial page 4 of Item 1 was received with it attached to the spiral notebook, the Item 2 note was once part of the Item 1 notebook. (Identification). Interpretation: The following descriptions are meant to provide context to the opinions reached in this report. Every type of conclusion may not be applicable in every case or for every exam type.</p> <p>Identification (definite conclusion of identity) — this is the highest degree of confidence expressed by Forensic Document Examiners. The examiner has no reservations whatsoever, and although prohibited from using the word "fact," the examiner is certain, based on evidence revealed during the examination.</p> <p>Highly probable did (strong probability, very probable) — the evidence is very persuasive, yet some critical feature or quality is missing so that an identification is not in order; however, the examiner is virtually certain based on evidence revealed during the examination.</p> <p>Probable did — the evidence is persuasive, yet critical features or quality is missing. The examiner is certain based on evidence revealed during the examination. During examinations, features were examined of significance and are in agreement between the questioned and known evidence; however, it falls short of the highly probable degree of confidence. Indications may have (evidence to suggest) — the evidence is persuasive, however many critical features or quality are missing. During examinations, features were examined which are of significance and are in agreement between the questioned and known evidence, however, it falls very short of the highly probable degree of confidence. No conclusion (inconclusive, indeterminable) — this is the zero point of the confidence scale. It is used when there are significantly limiting factors, such as disguise in the questioned and/or known evidence or a lack of comparable features and therefore no conclusion can be reached. Indications may not have — the evidence is persuasive, however many critical features or quality are missing. During examinations, features were examined which are of significance that are not in agreement between the questioned and known evidence; however, it falls very short of the highly probable degree of elimination. Probable did not — the evidence is persuasive, yet critical features or quality is missing. The examiner is certain based on evidence revealed during the examination. During examinations, features were examined of significance that are not in agreement between the questioned and known evidence; however, it falls short of the highly probable degree of elimination. Highly probable did not (strong probability did not) — the evidence is very persuasive, yet some critical feature or quality is missing so that an elimination is not in order; however, the examiner is virtually certain based on evidence revealed during the examination. Elimination - this is the highest degree of confidence expressed by Forensic Document Examiners. The examiner has no reservations whatsoever, and although prohibited from using the word "fact," the examiner is certain, based on evidence revealed during the examination.</p>
DMM4CZ	The questioned note (Q1) have originated from the notepad (K1) recovered from one of the suspected students.
DXHFK8	After an examination and comparison of disputed document marked "Q1" with the notebook marked "K1" I made the following observations: 3.1. The writing on the document marked "Q1" which says "I WILL KILL YOU" is also appearing on the note pad marked "K1". 3.2 In light of the above observations, I made the following conclusion that: 3.2.1 The questioned note marked "Q1" originated from the recovered note pad marked "K1".
EBKNWZ	Q1 can be identified within the limits of practical certainty*, as having originated from K1.
ED9U2C	THE CHALLENGED (QI) NOTE IF originated from the notebook (KI), EXACTLY THE FIRST PIECE OF PAPER.
EH98FH	The Item Q1 originates from the Item K1. The questioned note was in the notepad when the sentence "I WILL KILL YOU" was written.
EQG7MY	The pages within the first section of the K1 notebook were marked K1-1 to K1- 37, including the three remnants which were labelled K1-4 to K1-6. The page containing handwritten entries was marked K1-7. The Q1 note was observed to contain the same physical features (size, line spacing and printed defects) as the K1 notebook. Additionally, the black marker observed along the base of the K1 notebook was in the same location as the markings on the Q1 note. Using an examination for indentations, the writing

TABLE 3

WebCode	Conclusions
	<p>from the Q1 note was observed to be indented on the reverse of the page marked K1-7. This means that the Q1 page was in contact with K1 when the handwritten entries were produced. A tear match was observed between the page remnant marked K1-4 and the Q1 note using physical fit and the continuance of fluorescent fibres between the torn edges. Based on these observations, at some stage, the Q1 note originated from the K1 notebook and was attached to the remnant labelled as K1-4.</p>
EQGDZ8	<p>Q1 was a page in K1 before it was removed by tearing. A straight-edged instrument was used to facilitate a straight edge when Q1 was torn from K1. 1. Electrostatic Detection Device (EDD) processing of the fourth page in K1 revealed indentations corresponding to the handwritten text of Q1. These indentations in K1 were created when Q1 was written while positioned above the fourth page of K1. 2. Fibers on the first spine remnant in K1 (first of three present) match fibers on torn edge at left side of Q1; ruled lines on this first spine remnant are printed with variations that are consistent with those of the printed ruled lines on Q1. An edge mark was present on the first spine remnant in K1, supporting the opinion that a straight edge was used to make a straight tear when Q1 was torn from K1. 3. There is an ink spot on right side of bottom edge of Q1 that has the same location as similar ink spots on the bottom of pages in K1. Nondestructive IR and UV examinations of this ink spot revealed no differences between Q1 and K1, but this does not mean they were made with the same ink, only that no differences were detected with the non-destructive method of examination used. A chemical (destructive) examination of the ink spots at the bottom of each page in K1 and Q1 might be more definitive in determining similarities or differences, but a destructive examination was not conducted.</p>
F37WRH	<p>Significant evidence was found to establish that the page submitted as Q1 originated from specimen noted K1.</p>
F3RV3F	<p>It is my opinion that Q1 and K1.4 were at one time joined together to form a single object, meaning that Q1 was removed from the K1 notebook. Q1, K1.1, K1.2, K1.3, and K1.7 were examined for the presence of any indented writing, typing or other identifying impressions. These are impressions sometimes left on paper from writing; typing, or other markings done on another page while it was superimposed over the questioned material. The following impressions were located: K1.7 (front) bears impressions from the original writing on the front of Q1. No other meaningful or significant impressions were located. Various microscopic, infrared, and ultraviolet examinations were performed on the ink(s) used to produce the writing on Q1 and K1.7. These examinations revealed that the ink(s) could not be differentiated and reacted similarly throughout the spectrum. These examinations do not provide a positive identification of the ink formulation, however further chemical testing may be deemed necessary to determine if the ink(s) are the same or different ink formulation. The known writing on Q1 can neither be identified nor eliminated with the writing on K1.7. The lack of comparable known writing written in all uppercase letters and containing the same words and word combinations as the questioned writing hindered my examinations and precludes a more conclusive opinion.</p>
F3TQM7	<p>The Q1 note definitely originated from the K1 notepad.</p>
F42EV4	<p>Questioned note Q1 originated from recovered notepad K1.</p>
F4XHFJ	<p>It has been concluded that the Exhibit Q1 message was originally joined to the first narrow strip of paper that comes after the third page in the Exhibit K1 notebook. Further, indented writing was found in the Exhibit K1 notebook that was produced during the execution of the Exhibit Q1 message.</p>
F8H8YW	<p>On the basis of the combination of my observations made from numerous examinations conducted, I concluded that the paper of Q1 originated from K1, that the entry on Q1 was written while the page was still (directly or indirectly) overlying page 4 in K1 and that K1[sic] was torn from what is now referred to as strip 1.</p>
FB28B7	<p>The q1 note originated from the k1 notebook.</p>
FDN2UR	<p>It was determined the threat note Q1, came from the notepad K1.</p>
FDN4JW	<p>The evidence provides very strong support for the proposition that the threatening note on Q1 was at</p>

## TABLE 3

WebCode	Conclusions
	one time a single page in the recovered notepad K1.
FJTPPE	Considering the evidence as a whole, in my opinion, the paper of the questioned note Q1 once formed part of the notepad K1.
FLH4ZA	It was determined that the Item Q1 Threatening note originated from the Item K1 Notepad. The torn edge from the Item Q1 Threatening note was at one time attached to the torn edge on the fourth page (torn page) from the Item K1 Notepad. Indented writing "I WILL KILL YOU" was observed on the Item K1 Notepad (full pages 7, 8 and 9). The indented writing originated from the hand printed entry "I WILL KILL YOU" on the Item Q1 Threatening note. No indented writing was observed on Item Q1 (Threatening note) and Item K1 (Notepad), full pages 1, 2 and 3. Additional assessments and observations have been made on the submitted items and recorded for possible future comparisons.
FXW26E	It was determined the Q1 threatening note originated from the K1 notebook. The torn edges of Q1 and K1, p4, were at one time attached. The indentation of the Q1 letter was observed on page 7 of the K1 notebook.
G2TANE	The questioned note originated from the recovered notepad.
GCBNRG	Results of Examinations: The Item Q1 threatening note was at one time attached to the Item K1 notepad. Indented writing "I will kill you" was observed on a piece of Item K1 notepad paper. This indented writing originated from the Item Q1 hand printed entry "I will kill you". No indented writing or watermarks were observed on Item Q1.
GKNKVN	The questioned note originated from the recovered notepad. In an effort to recover any indented writing that may exist on the questioned material, the documents were submitted to an Electrostatic Detection Apparatus examination. Impressions were recovered on the page of the notepad containing writing. These impressions read "I WILL KILL YOU", and correspond to the writing on the questioned note. An examination utilizing the Video Spectral Comparator revealed that the ink and paper on the questioned note and from the notebook exhibit similar optical properties. The evidence, in its original state, has been imaged and archived in a digital imaging system. Should the evidence be degraded by other forensic testing, images can be used to conduct handwriting comparisons.
GPGKAJ	Upon completion of an examination and comparison of the items submitted, it is this examiner's opinion that the Q1 exhibit originated from the K1-0 notepad. An integral parts examination revealed that the Q1 exhibit was torn from the K1-1 portion of the K1-0 notepad. K1-2 was processed for indented writing on the Electrostatic Detection Apparatus (ESDA). The text of Q1 was impressed on the K1-2 exhibit.
GQPAFV	3.1 The threatening note marked "Q1" originates from the notebook marked "K1". 3.2 The note was torn from the page marked "K1B" (by the examiner).
GV4E3A	The questioned note ORIGINATED from the recovered notepad.
GWXV7E	In conclusion, I found the evidence to (provide) strong support that the questioned note (Q1) that was left on the victim's car, originated from the recovered notepad (K1).
H32YUR	After examination of both the disputed threatening note marked "Q1" and notepad marked "K1" the following conclusions were reached: 3.1 The left margin of the disputed threatening note marked "Q1" physically matched the right margin of the notepad marked "K1" which indicates that threatening note "Q1" originates from notepad marked "K1". 3.2 The wording "I WILL KILL YOU" on the disputed threatening note marked "Q1" matches the impressions "I WILL KILL YOU" on the notepad marked "K1". 3.3 When the disputed threatening note marked "Q1" is placed on top of the notepad marked "K1" the wording "I WILL KILL YOU" is superimposed to the indentations on the notepad marked "K1".
HCR8AT	In my opinion the evidence provides very strong support for the proposition that the questioned note Q1 has originated from (was once a part of) the notepad K1.
HFNQBR	The paper in Item Q1 has been physically matched (identified) as having once been attached to the torn



## TABLE 3

WebCode	Conclusions
	edges of the page marked (1) in Item K1. Additionally, the indentations of the text appearing on Item Q1 were observed on the page marked K1(a).
HRGDGM	Q1 and the K1 notebook share a common source. Specifically, Q1 was on top of the K1d and K1e pages when the Q1 handprinting that reads "I WILL KILL YOU" was written.
J2GW39	1 macroscopic observation. Q1 leaf notebook originates k1 for alignment of paper, or cut and fracture location of the lower ink stain. 2 Analysis indented text by video spectral comparator. By overlaying paper on sheets of notebook Q1 K1, hand-written texts are indented or hollows in equal proportion and location on the following sheets of notebook K1. 3 overlapping images to compare fractures or torn paper by video spectral comparator. By aligning edges and broken or torn paper documents against K1 Q1 is equal split. 4 Analysis of ink and paper by ultraviolet fluorescence by video spectral comparator. Paper and ink ballpoint pen against paper document Q1 Paper and ballpoint pen ink K1 have the same behavior under UV fluorescence technique wavelengths 254nm and 365nm. 5 ink and paper analysis by infrared fluorescence by video spectral comparator. Paper and ink ballpoint pen against paper document Q1 Paper and ballpoint pen ink K1 have the same performance under infrared fluorescence technique wavelengths between 665nm to 830nm. 6 ink analysis by infrared absorption by video spectral comparator The ballpoint pen ink Q1 document against ballpoint pen ink K1 have the same behavior under infrared absorption technique and are lost to absorption wavelength of 695nm.
J9LGMT	After examination and comparison with notepad (K1) I have found that the note (Q1) originated from notepad. The conclusion is based on the following: 1. Physical match at the edges of the torn pages. The physical match between edges of the note (Q1) and the edges of the first torn piece of page on the notepad (K1). 2. Indented writing (of the reading "I WILL KILL YOU") observed on the first page after torn pages, i.e on the page dated 3/2/15 of the notepad (K1).
JLRRW2	The questioned note (Q1) was created while the page (Q1) was in the notepad (K1) then torn from the notepad (K1) using a straight edge.
JNWK7K	The questioned note originated from the notepad.
JRZD24	Lab item#1 (K1-3, K1-7 and K1-8) was examined for the possible presence of indented writing[sic] impressions utilizing side/oblique lighting and ESDA (Electrostatic Detection Apparatus). Multiple impressions were found. See pages 2, 3, 4 for interpretation. Note: K1-7 back dated 5/5/15, K1-7 front dated 4/24/15 and K1-8 back dated 4/24/15 were chosen for reporting purposes. Lab item#1 (K1 front and back covers, K1-1 - K1-2, K1-9 - K1-148) was examined for the possible presence of indented impressions utilizing side/oblique lighting; no impressions of investigative value were found. Lab item#2(Q1) was examined for he[sic] possible presence of indented impressions utilizing side/oblique lighting and ESDA (Electrostatic Detection Apparatus); no impressions of investigative value were found. Lab item #2(Q1) was searched through the current Criminal Letter Database of the Police Laboratory's Questioned Documents Unit. As of May 26, 2015 this evidence cannot be associated with any previously submitted case. Lab item#1 (K1-4) and Lab item#2 (Q1) were visually and microscopically examined for physical match. The congruity of the class and the individual characteristics exist. Lab item#1 (K1-4) and Lab item#2 (Q1) were at one time joined together. The questioned note (Q1) originated from the recovered notepad (K1). See page 5 for interpretation. [Referenced pages not included.]
K84AWM	Request: Forensic examination of Submission 001 in order to determine if Item 001-1 originated from Item 001-2. Results: Forensic examination of submission 001 utilizing ink analysis (VSC-4) revealed similarities in the ink used on Items 001-1 and 001-2. Side lighting on Item 001-2 revealed indented writing similar to the Questioned writing on Item 001-1. Forensic examination of Item 001-2 utilizing indented writing revealed the words "I WILL KILL YOU". A lift was taken. Forensic examination of Items 001-1 and 001-2 revealed a physical fit match between the torn edge of item 001-1 and the fourth page of item 001-2. Remarks: The evidence has been scanned and photocopied and is being returned with a copy of this report. A lift of indented writing (ESDA) was taken and is being returned with a copy of this report. If known handwriting exemplars are obtained, and if requested, further examination will be conducted by this Laboratory. This report reflects the test results, conclusions, interpretations and/or

## TABLE 3

WebCode	Conclusions
	findings of the Analyst and Technical Reviewer as indicated by their signatures below.
KABUDV	In my opinion, there is conclusive evidence that the note, Q1, originated from the notebook, K1.
KYNVK6	The questioned note ORIGINATED from the recovered notepad.
KZNU4D	As a result of examination and comparison based solely on the material submitted, the following conclusions and observations are opinions based upon my experience, education and training and are as follows: 1. The note, described as Q1, did originate from and was associated with the notebook, described as K1. 2. The Q1 note was scanned for preservation by Specialist. 3. The Q1 note was processed for indented writing using the ESDA (ElectroStatic Detection Apparatus) on 05/20/2015, indented impressions of value were located on the K1 exhibit, deciphered as "I WILL KILL YOU". 4. On 05/20/2015 the Q1 note and the K1 notebook and the writing on the handwritten page in the K1 notebook, were examined using the VSC (Video Spectral Comparator 6000) to view the chemical reactions of the paper and the ink used for the writing. The paper and the ink in the K1 notebook and the single Q1 note reacted consistently under IRL and IRR. 5. The Q1 document was processed for latent fingerprints using liquid ninhydrin solution on 05/20/2015 by Specialist. The document was examined by the Latent Print Detail. 6. On 05/20/2015 the Q1 document was swabbed for DNA evidence. The swabs were placed into evidence.
L34P23	K1 and Q1 have the same size of height. Q1 was cut so you cant know what was the original size. The horizontal lines are the same color. The lines are the same in Q1 and K1. In one side of the page the lines are fine and in the other the lines are thicker. The paper has the same characteristics.
L43NJB	Note Q1 was part of notepad K1 when handwritten message "I will kill you" was written on it.
L7RU3L	The Q1 note and page 4 of the K1 notebook share a number of class and individual characterisitcs[sic]. Therefore, the Q1 note and page 4 of the K1 notebook were at one time joined to form a single page.
LHL92H	Hypothesis 1: Q1 originates from notepad K1. Hypothesis 2: Q1 originates from a randomly different notepad than K1. The findings are extremely more likely (>1.000.000 times) when Q1 originates from notepad K1 (hypothesis 1) than when Q1 originates from a different notepad (hypothesis 2).
LTVMPW	After an examination and comparison with the notepad I found that the note mentioned in paragraph 3.2 originated from the notepad mentioned in paragraph 3.1. 6.1 My observations were based on the following: 6.1.1 The physical match was observed between the disputed note and the first torn piece of paper found in the notepad marked by myself as "K1A". 6.1.2 The indentations of the disputed writing "I WILL KILL YOU" appears on the page in the notepad marked by myself as "K1D". 6.1.3 No physical match could be found, between the disputed document "Q1" and the other two torn pages from the notepad marked by myself as "K1B" and "K1C".
LUERHA	3.1) Item Q1 and Item K1 (page 4) were at one time joined together. 3.2) Item K1 (page 7) was examined for the presence of indented impressions utilizing oblique lighting and the Electrostatic Detection Apparatus. Indented impressions were found which correspond to the handwritten entries on Q1. A machine copy of the developed indented impressions are being returned with this report. 3.3) Item Q1 was examined for the presence of indented impressions utilizing oblique lighting and the Electrostatic Detection Apparatus; no impressions of investigative value were found. Remarks: 1) The physical match of Item Q1 with items K1 (page 4) is demonstrable through the use of enlarged illustrative charts. If testimony is anticipated please allow at least three weeks for the necessary preparation. 2) The developed indented impression lifts are being returned as item #02 for your safe keeping. [Images were not included with the report.]
M2ATZU	3.1 After an examination and comparison of the respective material, I reached the following conclusions: 3.1.1 The Questioned note (Q1) originated from the recovered notepad (K1). 3.1.2 The edges of Q1 (questioned note) and K1 (notepad) physically matched, confirming that "Q1" was removed from "K1". 3.1.3 The questioned note "Q1" and the notepad "K1" are both UV bright proving that they are from the same source. 3.1.4 The words "I WILL KILL YOU" found on the questioned note "Q1" are



## TABLE 3

WebCode	Conclusions
	also found as indentations on the notepad "K1" and fit perfectly on each other when superimposed.
MEEB92	It was determined that the Q1 note originated from the K1 booklet. An examination conducted using the Electrostatic Detection Apparatus (ESDA) showed the presence of the Q1 writing indented into the page surface in the K1 booklet that bore the date "3/2/15". In addition, a side-by-side examination of the Q1 page and the first of three tabs preceding the written page in the K1 booklet show an agreement of corresponding tear patterns and matching torn fibers that indicate the Q1 page was torn from that first tab in the K1 booklet. Additional supporting evidence includes the following: there is a black mark on the bottom of the Q1 note that corresponds in location and size to a black line on the bottom of the K1 booklet: the Q1 page measures 9 cm x 13.7 cm, as do the interior pages of the K1 booklet (from the perforation line to the page edge); The Q1 has 17 horizontal grey lines as do the interior pages of the K1 booklet; and the Q1 page and the interior pages of the K1 booklet both show consistent paper texture, color and UV reaction.
MFRGCD	It seems that the sheet Q1 belongs to the bloc K1, but do not rule out the possibility that the bloc has been manipulated, adding pages similar. They could have added three pages: Q1, leaf manuscript text k1 and next to it, since it is possible to mount and dismount the spiral notebook unnoticed that has been manipulated. [sic]
MGMZFY	Visual, microscopic, infrared, and ultraviolet examinations revealed that the physical properties of the paper in the Q1 note are consistent with the physical properties of the paper in the K1 notebook. Indentations of the handprinted entries on the Q1 note were recovered from the K1 notebook using the Electrostatic Detection Apparatus (ESDA). Therefore, it can be concluded that the Q1 note originated from the K1 notebook.
MHY8QZ	Threatening note reading "I WILL KILL YOU" (Q1) originated [sic] the recovered notepad (K1).
NADV4	Item Q1 originated from Item K1.
NBPZE9	In consideration[sic] of the findings about indented writings and matching of the paper edges[sic] it is concluded that the question note Q1 is originated from the recovered notepad K1.
NC6KHX	There is an exact match between the ripping edge of the threatening note to the first thin paper strip in the spiral binding (left over of a torn out page). Even the offset printed lines on the note and the paper strip match perfectly (front AND back). The Black "mark" on the lower edge of the note also matches the black line that runs across the paper edges of the notepad. Regarding our observations we conclude that the paper of the note got ripped out of the recovered notepad.
NERXP2	By using visual examination method, light penetrating method, ESDA and overlapping comparison, the questioned note(Q1) originated from the recovered notepad(K1).
NHQE3V	In view of the significant observations, it was concluded that the questioned note "Q1" originated from the notepad "K1". In particular, based on the physical match of the torn edges and paper fibres, the evidence shows that "Q1" was once part of the fourth page of "K1".
NVZHJG	1. The Exhibit Description is clarified as follows: Exhibit 1(1-7) - Known pages and remnants of pages from a spiral bound notebook. Exhibit 2 - Questioned threatening note. 2. Exhibit 2 was once part of and originated from the notebook submitted as Exhibit 1. 3. Exhibit 1(7) was examined for the presence of indented writing. Indented writing impressions from Exhibit 2 were present on Exhibit 1(7).
P8B68V	The sheet of paper that contains note questioned Q1, presents identity with the edges of the first fragment of paper ring in the indubitable book K1, therefore the sheet of paper Q1 comes from the confiscated book K1.
PB6LLP	The questioned note originated from the recovered note pad "K1". The questioned note originated from the recovered note pad "K1" in respect of the indentations on the note pad when exposed to magnification and oblique light and the use of ESDA. The physical match on both the threatening note "Q1" and the note pad "K1" are visible under magnification and flood.

## TABLE 3

WebCode	Conclusions
Q9F6WU	It has been concluded that the questioned threatening note (Q1) did originate from the notepad (K1) from one of the suspected students.
QBQ3AC	Exhibits Q1 and a paper fragment from within Exhibit K1 were at one time a single sheet of paper.
QGEKTU	The threatening note, if applicable to the first cut sheet of notebook.
QL3CUV	The questioned note does in all probability originate from the recovered notepad. The margin of error is regarded as merely hypothetical[sic].
QMJGCU	The sheet with the questioned note originated in the notepad.
QPLJYB	Indented writing bearing the hand printed text from Item 2 (Q1) was recovered from Item 1.7 (K 1.7). The torn edges of the three paper remnants, Items 1.4, 1.5 and 1.6 (K1.4, 1.5 and 1.6), were examined microscopically and compared with the torn edge on the left side of Item 2 (Q1). Item 2 (Q1) has been identified as having originated from Item 1.4 (K 1.4).
QV9P27	A[sic] came to the finding that the threatening note (Q!)[sic] originated from the recovered note pad (K1).
R2T2FY	The questioned note q1 originated from the recovered notepad k1
R2TRE8	The piece of paper Q1 originates from the notebook K1, having been torn from the paper strip 4th in from the front.
R3CFYM	1. The notepad was examined. As received, the 4th, 5th and 6th pages of the notepad were partially ripped out. The paper fragments of these three pages were still attached to the spiral ring. Some numeral entries and English Letters were found on the 7th page of the notepad. The remaining inner pages were all blank. 2. The threatening note was examined. The words "I WILL KILL YOU" were found written on one side while the other side was blank. Torn edge was found on the left-hand margin of the threatening note. 3. Examination of the 7th page of the notepad revealed indented marks of writing. The indented marks of writing were found to be superimposable to the handwriting on the threatening note. The above findings indicate that the 7th page of the notepad was placed directly underneath the threatening note when the handwriting was executed. 4. Moreover, the torn edge of the threatening note could be physically fitted together with the torn edge of the paper fragment of the 4th page of the notepad. The above findings indicate that the threatening note had been ripped out from the notepad. 5. Furthermore, the threatening note and the inner pages of the notepad were also agreed in color, height, design of background printing (singled[sic]-lined) and unique dirt mark (ink stains on the lower right hand edge of the page). 6. In view of the above findings, I am of the opinion that the threatening note originated from the notepad.
R4XFUW	Indentations of the questioned text from Item Q1 were observed on the fourth full page, counting from the front cover, of Item K1 (the seventh page if the page fragments are counted also). An image of this indentation will be provided under separate cover. The torn/cut items were at one time attached - It was determined that the Item Q1 piece of paper and the first page fragment, counting from the front cover, of Item K1 were at one time attached.
R7QM6G	After examination I reached the following conclusion: 1 The threatening note marked "Q1" originates from the notebook marked "K1". 2 The note was torn from the page marked "K1 (a)" (by the examiner).
RAQGWB	Based on visual and instrumental examinations of Exhibits Q1 and K1, it was determined Exhibit Q1 originated from Exhibit K1 based on the following observations: Fracture match examination determined Exhibit Q1 was once connected to Exhibit K1 (the first torn remnant). The black fluid ink mark on the bottom edge of Exhibit Q1 and K1 align. Sourced indented impressions were observed on Exhibit K1. These impressions were sourced to Exhibit Q1.
RFVXXX	The questioned note (Q1) originated from the recovered notepad (K1).

## TABLE 3

WebCode	Conclusions
RJDFMG	The Q1 note was once a part of Item K1, specifically that portion found in the K1 notepad numbered K1.1, which is a remaining torn portion found intact and attached to the metal spiral binding. This opinion is based on the notation of paper fracture matches between the Q1 and K1.1 papers and on examination for indentations that revealed the Q1 hand printing in indented form on the K1.4 and K1.5 pages within the K1 notepad. No conclusion could be reached as to a common writer for Items Q1 and K1.4. This opinion is based on the notation of a class characteristic style of writing found on Q1, lacking sufficient individualization. Optical examinations revealed no appreciable differences between Q1 and K1.4 with respect to paper or rulings, however, a destructive examination is recommended to preclude any chemical differences. This is especially warranted on the writing inks as some slight variations in reactions were noted.
RJX7RV	The questioned threatening note (Q1) origins[sic] from the notepad (K1).
RKM6UE	The examination resulted in the finding that the questioned note (Q1) originated from the notepad (K1), due to the following aspects: 3.1 Indentations on the notepad (K1) were revealed, which matches the wording on the note (Q1). 3.2 Both the substrate (K1 and Q1) are UV bright. 3.3 Physical match collaborate that the note Q1 originated from notepad K1.
RZM8R8	The torn edges of Exhibits Q1 and K1 (spiral remnants of pages 4-6) were examined and compared visually, microscopically, under infrared and infrared luminescent light sources. The examination and comparison revealed that Exhibit Q1 originated from (was once part of) K1 (notepad), specifically the spiral remnant of page 4. Please see the attached images for details. The examination also revealed that the black line of liquid ink present along the bottom right edge of Exhibit K1 (notepad) and the bottom right portion of K1 (pages 1-3 and 7-9), is also depicted in the bottom right portion of Exhibit Q1. Exhibits Q1 and K1 (pages 1-3 and 7-9) were examined for the presence of handwriting indentations using the Electrostatic Detection Apparatus (ESDA). Results were negative for Exhibits Q1 and K1 (pages 1-3). Results were positive for Exhibit K1 (pages 7-9). The indentations recovered on Exhibit K1 (pages 7-9) appear to read "I WILL KILL YOU", which is the same entry depicted on Exhibit Q1. This indicates that Exhibit K1 (pages 7-9) was beneath Exhibit Q1 when it was written. Please see the attached images for details. Exhibits K1 and Q1 will be returned to the submitting agency. [Images were not included with the report.]
T2T9RW	It was determined that the Q1 note was at one time attached to page 4 of the K1 notepad. Indented writing was observed on page 7 of the K1 notepad that corresponds to the Q1 writing.
TCTHW9	The questioned note, Q1 originated from the recovered notepad, K1.
THDE6B	In light of the observation, I came to the conclusion that the questioned note "Q1" originated from (was once part of) the notepad "K".
TJ8ZWG	The questioned note originated from the note pad.
TKNKZ6	I examined "Q1" and "K1" and found that: i. The torn edge of "Q1" matched physically with the torn edge of page 4 of "K1"; and ii. The indented writing impression lifted from page 7 of "K1" showed the words "I WILL KILL YOU". This indicated that page 7 of "K1" was below "Q1" when the handwritings were executed on "Q1". In view of the above findings, it was concluded that Q1 was at one time joined to page 4 of "K1" as a single piece of paper.
TNL2BE	Visual examination, infrared and ultraviolet examination, and electrostatic processing reveals the following: The questioned note (item 1a) originated from the notepad (item 1b). Items 1a and one page from item 1b were at one time joined. One page from item 1b was processed for the presence of indented writing with positive results. The text from the questioned note (item 1a) was detected. The ESDA sheet has been added as item 2 and will be returned with the original evidence.
TUATE2	The evidence was evaluated in terms of the following competing propositions: Proposition 1 (H1): Q1 was once part of K1. Proposition 2 (H2): Q1 originated from some other source (eg. writing pad) and was never part of K1. The evidence provides extremely strong support, verging upon conclusive, for H1

## TABLE 3

WebCode	Conclusions
	over H2.
TZHLKD	After examination and comparison the notepad marked (K1) I found that the note (Q1) originated from notepad marked (K1). The following observation were made: 1. Physical match at the edges of the torn pages marked (Q1) and the edges of the first torn piece of page on the notepad marked (K1). 2. Indented writing of the reading "I WILL KILL YOU" observed on the first page after torn page, the notepad marked (K1) dated 3/2/15.
U9LN9M	The questioned note "Q1" originated from the notepad "K1". Identification is based on the following: 3.1 Physical match (Using flood lights from the Video Spectral Comparator). The notepad "K1" had three pieces of pages that remained when pages were cut. After conducting a physical match of the the[sic] remnants of the cut pages in "Q1" and the questioned note "K1", one of the pages on "Q1" matched with "K1" (in the edges of the papers complemented each other, the lines were similar in number and space between them). 3.2 Presence of Indentations (using ESDA). Change in the electrical potential of the indented areas (or part of the paper with writing impressions) revealed the presence of indentations of the questioned note "Q1" reading "I WILL KILL YOU", that were observed on the first page immediately below the cut pages of notepad "K1". 3.3 Presence of Indentations (Using oblique or side lights from the Video Spectral Comparator). Indentations of the questioned note "Q1" reading "I WILL KILL YOU", were observed on the notepad "K1", revealing the same writing.
UKKC9X	It was determined that the Q1 note was at one time attached to page 4 of the K1 notebook. Indented writing of the Q1 note was observed on page 7 of the K1 notebook. Additional assessments and observations have been made and recorded for possible future comparisons.
V8CWZ8	Upon completion of an examination and comparison of the exhibit and standard submitted in this case, it is the opinion of this examiner that the Q-1 exhibit was once an integral part of the K-1 standard. Specifically, the Q-1 exhibit was once an integral part of the paper remnant designated K-1 4 found inside the K-1 notebook. One of the whole pages of the K-1 notebook, page K-1 7, was processed with the ESDA. Impressions interpreted as "I WILL KILL YOU" were recovered. A copy of the ESDA result will be attached to the evidence envelope.
VAUDTC	Microscopic, visual and instrumental examinations were conducted to determine if the Item Q1 note originated from the Item K1 notepad. Examinations included; visual examinations with light directed from various angles, fracture comparisons, microscopic examinations, electrostatic detection apparatus examinations for indented writings, and spectral imaging for stray marks and hidden writings. It was concluded that: the Q1 note was at one time a single piece of paper with one of the stubs in the K1 notepad, and the handwriting of the Q1 note was written while in contact with the notebook.
VAUR9C	After an examination I found that the questioned note (Q1) originated from the recovered notepad (K1). 3.1 My observations were based on the following: 3.1.1 The physical match was observed between the disputed note and piece of note found in the recovered notepad. 3.1.2 The indentation of the writing "I will kill you" on the note appears on the page of the recovered notepad.
VC26TY	After analysis, comparison and evaluation plus verification of Q1 and K1 with the use of a stereo microscope and ESDA, I found that the writing in Q1 came from the note book K1 as the letters "LL" emerged under electrostatic use and the edges (torn0[sic] from Q1 match those from K1 when comparing them.
VF2DYU	The question note Q1 originated from the recovered notepad K1.
VLMCP3	A definite opinion could not be reached whether the Q1 specimen originated from the K1 notepad. However, the Q1 specimen corresponds in size and design.
VM3WTR	Microscopic and instrumental examination and comparison of the submitted items revealed the following: The note in item Q1 originated from the notepad in item K1. Indented writing consistent with the note in item Q1 was developed from the notebook in item K1. The torn edge of the note in item Q1 was compared with the paper remnants left in the notebook in item K1 and found to match one of the remnants. During examination the paper remnants were removed from the notebook in item K1 and

## TABLE 3

WebCode	Conclusions
	repackaged. In addition the paper and inks used on items K1 and Q1 could not be differentiated under various light sources and settings.
VU4M34	It is my professional opinion that the questioned note originated from the recovered notepad. The questioned note contains important pieces of information that connect it to the recovered notepad. The questioned note embodies: 1) Tear marks on the left side of the document, matching tear marks from residual paper left in recovered notebook. 2) A scored downward edge on the right side of the document, matching the same type of scoring on pages in recovered notebook. 3) Same type and size of white lined paper as recovered notebook. 4) Black felt tip dot on lower right of document, matching a black felt tip vertical line created on the recovered notepad.
WADVJX	In my professional opinion, the questioned document was most likely produced while residing in K1 notepad directly or indirectly above the page beginning, "3/2/15 Math:..."
WJXUXM	After an examination and comparison of exhibit marked "Q1" with a note pad marked "K1", I reached the conclusion that the questioned note "Q1" originated from the recovered note pad "K1", based on the following observation written below: The note pad "K1" was having three missing pages, which indicates that they were cut out from the note pad. The size of the "Q1" note when merged with the missing pages in "K1" is of the same size as the original pages in the note pad. There was consistent black line on the bottom right hand side of the note pad which was identical to the one found on the note. The writing inks on the two documents were having similar reaction of fading when observed under a filter light of 645 nm. The indentation observed from "K1" using VSC were lifted using the ESDA instrument which matched the writing "I WILL KILL YOU" on "Q1". This indicates that the written note "Q1" was part of the removed pages from the note pad marked "K1".
WNVLHZ	The sheet "Q1" belong to the notepad "K1" and correspond to the first cut page of the notepad "K1".
WPLHTR	The note Q1 was once part of the notepad K1. Q1 was torn from the notepad, together with 2 other absent pages, leaving 3 stubs. 2 further leaves may have been removed, but not leaving traces of stubs, from sections 1 and 2 of the notepad. The writing of the note Q1 has made indented impressions on the page dated 3/2/15 in K1, so the note was in close contact with that page, the writing was probably made before Q1 was torn from K1. Should handwriting samples, in capital letters, of a suspect become available it would be possible to compare the samples with the writing on the note Q1.
WQYGYH	After examination of handwritten note and note pad I found that the note originates from the note pad. A physical match of the note and note pad under flood light was positive. Indentations on the hand written page of the note pad were observed under ESDA and side light.
WZNT9U	It was determined that the Q1 document was at one time attached to the page 4 portion of the K1 notebook. Indented writing was observed on page 7 of the K1 notebook which corresponds to the text found on the Q1 document indicating that the pages were in contact with Q1 when it was written. Additional observations have been made regarding the submitted items and recorded for possible future comparisons.
X383WL	According to the analyzes performed, the provided material (Q1) and (K1), and the reasoning set out above technical, it is determined that the dubitado note comes from the book seized.[sic]
X7KJWX	Based on the test and analysis I have conducted, I have concluded that the questioned document or item "Q1" originated from the recovered note pad "K1".
X8GZ9U	Note questioned threat originated from notebook recovered. Therefore the list of conclusions of the questionnaire response have selected the letter A. The threatenings note was originated from the first cut of the notebook.
XGQP4Y	Document Q-1 originated from the known notepad recovered.
XGRKPQ	It was concluded Q1 originated from K1.

TABLE 3

WebCode	Conclusions
XTK44V	The note, Q-1, originated from the notepad, K-1.
XZ3LFH	I found the evidence to support the proposition that the note marked as "Q1" did originate from the notepad marked "K1" and more specifically the page was torn from the page marked as "K1.1" by the examiner.
Y69E8T	1) The Q1 note originated from the spiral notebook found as K1. 2) ESDA results show the impressions of the questioned hand printing on the internal page reading "3/2/15" regarding math & english assignments. 3) The 3 strips found above the 3/2/15 K1 note bear cut marks and through microscopic and photographic examination, the Q1 note most probably was attached to the top strip of the 3 strips found in K1. 4) The black edge mark found at the lower right corner of the Q1 document matches the similar black marks found in the K1 notebook.
YEUTUV	The results of the forensic examination of the threatening note and the notepad recovered from one of the suspected students prove that the questioned note (Q1) originated from the seized notepad (K1). The main results were: Indented lines of the threatening note were found in the notepad. The edge lines of Q1 fit the edge lines of one of the page remnants. No differences concerning paper and ink could be observed.
YK4WWQ	The examination results showed the page having the writing in question originated from the notebook submitted for comparison. The conclusion was based upon the conformation of the optic brightness of the questioned note with the notebook paper, the match of the paper fracture of the questioned note with the first torn paper remnant in the notebook, as well as the alignment of the written text on the the[sic] note with the indentations on the first page in the notebook containing handwriting.
YMQ6XY	Notebook K-1 and Q1 were examined using forensic techniques. The procedures are grounded in the generally accepted body of knowledge and experience in the field of forensic document examination. By following these procedures a forensic document examiner can ascertain within a reasonable degree of certainty the authenticity of a signature, document or questioned material. The (K1) notebook and torn page (Q1) were examined using a Miscope MP 2-IR Microscope, 40x, 40x with on board 2 MP digital camera and Infrared light source, and a Celestron Digital Microscope with 10x-150x with on board 2 MP digital camera. A Logan A-7a edge light pad and Projectina 10x magnifier were employed as well as Oblique lighting techniques and various magnifiers.
YN3924	It has been determined that the questioned note (Q1) originated from the recovered notepad (K1). K1 was examined with side lighting & the ESDA for latent indented writing. Sidelighting revealed what appears to be the word "WILL". ESDA results revealed the phrase "I WILL KILL YOU" found on Q1. Copies of the ESDA lifts are attached to report. A microscopic paper fiber examination was performed between Q1 & the three paper strips found in K1. Matching paper fibers were found between Q1 & one of the paper strips using oblique & ultraviolet lighting. See attached images. [Images were not included in report.]
YWZXKT	The Item Q1 note originated from the K1 note pad.
YZF8CK	I found the evidence to support the proposition that the "note" marked as "Q1" did originate from the "notepad" marked as "K1".
Z2MKXR	Based on the observations made to the notebook, specifically to three (3) argolladas butts and cut sheet containing the manuscript threatening "I will kill you", it follows that the sheet labeled "Q1" comes from the first argollada cigarette that is part of the notebook labeled "K1". [sic]
Z2Q4KV	After an analysis I found that the questioned note originated from the notepad.
Z4BGGX	Indentations resulting from the text seen on the questioned note (Q1) were located on page 7 of the submitted notebook (K1). These show that the text of the questioned note was completed while it was resting within the notebook K1. Both gross and subtle similarities were found between the torn edge of the questioned note and that of the stub in page position 4 (marked by me K1.4) in the submitted notebook. These similarities included a consistent tear pattern and matching severed fibres. Based on



## TABLE 3

WebCode	Conclusions
	these similarities I concluded that the questioned note has been torn from the paper stub K1.4 and has therefore originated from the notebook K1.
Z62GZ9	1. "Q1" originate from the document marked "K1". 2. The wording "I WILL KILL YOU" was revealed from the document marked "K1".
Z7J9EY	I find that there is a physical fit between the torn edge of the note, item Q01 and one of the torn pages in the book K01. In my opinion the note Q01 was once part of the book K01.
Z8QNJK	3.1 After a comparison and matching of the respective materials, I discovered the writing, paper fibers, torn on the threatening note marked Q1 showing significant similarities in respect of the paper fibers, torn, physical match, letter design and construction, relative size and general execution to the Notepad K1. 3.2 In the matter at hand, I applied the examination methodology (ACE Law) utilizing VSC: Various lighting techniques and Esda. After examination and comparison I reach the conclusion that: 3.3 The question note marked (Q1) originated from the recovered Notepad marked K1.
ZBUGGP	Demonstrable evidence in the subject notebook shows a clear connection to document Q1.
ZF6X7Y	Exhibits Q1 (the questioned note) and K1 (the notebook) were examined visually, microscopically, under ultraviolet, infrared, and infrared luminescent light sources and these examinations revealed the following: The writing ink, paper, and printed margin lines of Exhibit Q1 are similar to that found on Exhibit K1 (7) (a page with handwriting from the notebook - Exhibit K1) and were not distinguishable at this level of analysis. Also, Exhibit Q1 and several pages of Exhibit K1 contain a similar marking of a black liquid-type ink located at the bottom right corner. This ink was also examined visually, microscopically, under ultraviolet, infrared, and infrared luminescent light sources and the ink of these markings were not distinguishable at this level of analysis. Please see the attached images for details. Further, physical and microscopic edge examinations of the torn left edge of Exhibit Q1 and those torn edge remnants located in Exhibit K1 and designated as Exhibit K1 (pages 4-6) revealed that Exhibit Q1 and Exhibit K1 (page 4) were at one time joined to form a single piece of paper. Please see the attached images for details. In addition, some of the indentations found on Exhibit K1 (pages 7-10) originated from the handwritten entries found on Exhibit Q1. These results indicate that Exhibit Q1 originated from Exhibit K1. Exhibits Q1, K1 (1-10), and the original ESDA indentation lifts were digitally scanned and a CD of the digital images will be retained by this laboratory. [Images were not included with the report.]
ZQRWYP	It was determined that the edges of Q1 and K1 page 4 were at one time attached. Indented writing was observed during the examination of K1 pages 7 and 8 and corresponds to the writing on Q1. This indented writing is best read as: "I WILL KILL YOU". Four photocopies of the indented writing will be returned under separate cover for your investigative assistance. The handwriting on Q1 is suitable for comparison. If future handwriting comparisons are desired, dictated and undictated known writing should be obtained from any logical suspect(s). The known writing should be comparable to the questioned writing in wording, format, and style. Dictated known writing should be obtained on lined paper similar to the questioned specimen and should be removed from the writer's view upon completion. Numerous repetitions may be necessary in order to obtain naturally prepared writing. Undictated known writing consists of writing prepared during normal course of business activity. Possible sources of undictated known writing include business papers, letters, canceled checks, and/or applications. Additional assessments and observations have been made regarding the submitted specimens and are recorded for possible future comparison. [Images were not included with the report.]
ZXPN3C	When examined item K1 contains writing impressions consistent[sic] with the writing on item Q1. The torn/cut edge of item Q1 can be physically matched to the torn/cut edge of the 1st stub of paper in item K1 in relation to the contour of the torn edges and the alignment of the page lines. Item Q1 can also be matched to the remaining pages in item K1 in relation to the black dots at the base of the pages. Based on these observations I have determined that item Q1 was a page within K1 when the writing was produced. The questioned note (Q1) originated from the notepad (K1).

# Additional Comments

## TABLE 4

WebCode	Additional Comments
247VA3	The notepad "K1" is the origin of the note "Q1".
3ZLNZU	he[sic] writing on the questioned document (Q) and specimen could not be matched at this stage as there is a lack of additional specimens to make a conclusive finding. Size of the paper and black mark at the bottom of the page with a marker aligns with the questioned document and note pad.
46TYNY	Submission of two types of additional known writing samples by the K1 writer could enhance a subsequent examination of this case and may result in a more conclusive opinion. These samples are: Requested - These samples should be taken on twenty (20) to thirty (30) sheets of paper, duplicating the questioned document(s) in size, shape, and format. The text of the questioned document(s) should be written verbatim, at the dictation of the investigating officer. Do not allow the writer to see the questioned writing prior to producing the samples, and remove each exemplar from view after it is written. Collected - Provable writing samples that were produced in the past during the course of the subject's normal daily affairs, such as legitimate canceled checks, job applications, court records, etc. These samples help verify that the writing samples taken at the request of the investigating officer are normally written. These samples also offer a broader range of an individual's writing for examination.
4L4LAA	The spiral binding of K1 was removed for examination purposes and reattached after completion of the examination.
4RLVGJ	Ultraviolet and infrared examinations were also conducted which are in support of the above stated conclusion.
6D7PVQ	Side/Oblique lighting was used as an additional tool to examine the note pad and the questioned documents.
7LFYUP	The edge the questioned note fits perfectly with [sic] edge of the missing fourth [sic] of the notepad recovered.
7VZBYA	The findings are demonstrable through enlarged illustrative charts. All illustrations and observations stored according [sic] quality system. In questioned document examination we use 5 point conclusion scale, like proposed in section 1.
7ZCQKE	Original writing was found on the exhibits. Should a writing ink examination be required, a request for ink analysis must be submitted.
8E3ACM	The top, bottom and right-hand edges of the handwritten note, item Q1, have the appearance of being "machine made" but the left-hand edge is very slightly jagged as though torn against a straight-edge. The writing of the note is heavily indented into the paper. The paper of the handwritten note, item Q1, is of the same general appearance and dimensions as the leaves in the notepad, item K1. The printed lines on the note are of similar appearance to those on the leaves in the notepad and a black mark on the bottom edge of the note corresponds in appearance and position with marks on all the leaves currently in the notepad. Three plastic dividers, held within the binding of the notepad, item K1, separate its leaves into four sections. In the first section, between leaves three and four, there are three stubs held in the wire binding showing where each of three leaves had been in large part removed. Illuminating the fourth leaf of the notepad at low angles revealed faint indentations which match the wording of the note, item Q1. Had that note been written while resting directly on the current fourth leaf I would have expected to see much deeper indentations. Using a low-power microscope I observed that the torn edge of the handwritten note matches closely the torn edge of the first stub in the notepad and I found no such match with the torn edge of either the second or third stub. The faintness of the indentations found on the fourth leaf would be explained had the note been written while resting on that leaf not directly but with two other leaves intervening. I removed leaves 4 and 5 from the notepad, leaving a stub of each within the binding, numbered them in their lower-left corners, and searched each for indented impressions using the electrostatic technique. In each leaf I found indentations which matched the writing of note, item Q1. The match was sufficiently close for me to conclude that those indentations in the notepad, item K1, were caused by the writing of the note, item Q1. In each of leaves 4 and 5 the



TABLE 4

WebCode	Additional Comments
	position of the indentations with respect to the edges of the leaf was the same as the position of the writing in the note with respect to the edges of that leaf. That leads me to conclude that it is almost certain that the note, item Q1, was written while that page was bound in the notepad, item K1.
8RV4XA	The questioned writing is fluently written with no obvious distortions as is the writing on the 4th full page in K-1 (notebook). However, the writing on the 4th full page in K-1 is insufficient to conduct a meaningful handwriting comparison with the questioned writing. If appropriate known writing samples could be obtained a handwriting comparison could be conducted of the Q-1 writing. Additionally, Q-1 could be processed for latent prints for identifiable prints, which if present could be compared to known impressions (if obtainable).
8WBRFK	In summary to the results of the document examination, it is revealed that the note Q1 has been written when still in contact to the pages in the notepad. Faint latent traces of writings were detected on the paper surface of the page with the notes "2/2/15[sic] Math: #1-25 #30-35 English: p. 16-88 worksheet" of the notepad K1.
9T24DZ	Should a handwriting examination of the hand printing on the Q1 note or on page 4 in the K1 notebook be desired, known writing should be collected from any subjects of interest and submitted to the Forensic Document Unit (FDU) along with the writing in question. The electrostatic detection device (EDD) lifts are uniquely labeled CTS15521.001 and CTS15521.002; are considered secondary evidence; and will be returned with the originally submitted items. Scanned images of the EDD lifts and the items submitted are being retained by the FDU for future reference.
AGAKQH	Q1 matched K1-1, but there are two torn sheets that were once part of this notebook that were not submitted with this case.
BVHH2F	In this case it would be important documentología[sic] previous study, make a fingerprint scan in order to locate possible fingerprints of the person or persons they may have manipulated the note
CAVDUG	The reasons that no indented writings were detected on the paper beneath the three torn pages in K1 are probably due to: (i). the writing impressions only remained on the second and third torn papers (the fifth and sixth pages in K1), thus they were removed (torn), or, (ii). a hard paper was put underneath the questioned note to avoid indented writings being detected.
CAWHHJ	The evidence provided by the ESDA demonstrates ONLY that the Q1 note was written while positioned in the notebook. It DOES NOT allow for the conclusion that the Q1 note was once part of the notebook. The tear pattern match (confirmed under IR Luminescence) allows for the conclusion that the Q1 page also originated from the notebook. Other observations/evidence that was noted, but not pursued due to its low probative value relative to that provided in the paragraph above. These observations included (from highest to lowest relative probative value): Guillotine marks on the Q1 page which were similar in location to the prominent ones seen on the edges of the K1 notebook. Black marker slash across bottom edge of K1 notebook. Black mark seen on the Q1 page consistent in position to that of the notebook mark. Similar offset litho printing defects within the K1 notebook and the Q1 page. Handwriting - clockwise formation of 'O' in Q1 "YOU". Clockwise formation of 'O' in "30" entry in K1. Visually similar black ballpoint pen (K1 and Q1)
CZV78B	Lab item #1 (K1) small note pad was found in small envelope marked "test No. 15- 521 Item Q1." Lab item #2 (Q1) torn partial piece of small note pad paper with handwriting thereon found in small envelope marked "test No. 15-521 item K1." resealed the evidence as found.
DBQJ42	The scale of conclusions is based on the logical approach and is constructed exclusively for evidence evaluation at [Laboratory]. Level +4 The results of the examination extremely strongly support that ... The results are extremely more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level +3 The results of the examination strongly support that ... The results are much more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level +2 The results of the examination support that ... The results are more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level +1 The results of the examination support to some extent that ... The results are somewhat more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level 0 The results of the examination support neither ... nor ... The

TABLE 4

WebCode	Additional Comments
	results are equally probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level -1 The results of the examination support to some extent that ... was not ... The results are somewhat more probable if the alternative hypothesis is true compared to if the main hypothesis is true. Level -2 The results of the examination support that ... was not ... The results are more probable if the alternative hypothesis is true compared to if the main hypothesis is true. Level -3 The results of the examination strongly support that ... was not ... The results are much more probable if the alternative hypothesis is true compared to if the main hypothesis is true. Level -4 The results of the examination extremely strongly support that ... was not ... The results are extremely more probable if the alternative hypothesis is true compared to if the main hypothesis is true. If one of the hypotheses can be excluded other terms are used, such as "it is", "it is not" or "it can be excluded that".
DM2B9M	Handwriting Comparisons Results: Handwriting comparisons between page 7 of Item 1 and Item 2 will not be conducted at this time. If handwriting comparisons are later requested, known writing in all upper case, containing similar letter combinations and words as the questioned writing must be submitted. (No Exam)
EBKNWZ	* Practical Certainty: Since it is not possible to collect and examine samples of all similar tears, it is not possible to make an identification with absolute certainty. However, all scientific research to date and the extremely large number of discernable ways in which paper can be torn or cut have demonstrated that even without a numerical threshold, document examiners can reliably make identifications.
ED9U2C	When I refer to the first chunk of paper, be had in it counts to that it is later to the leaf without texts.[sic]
F3RV3F	The evidence was examined and imaged. In the event that a handwriting examination is requested in the future, resubmission of the original questioned document is desired. Please contact the Questioned Document Unit regarding obtaining known writing samples, if necessary. This office does not have the capability to chemically analyze the questioned writing on Q1 and K1.7 to determined if the ink(s) are the same ink formulation. In order to determine this, the evidence should be forwarded to [Laboratory] in [State]. If this type of examination is desired, please contact your local [Laboratory] field office in order to make the necessary arrangements.
F4XHFJ	The Exhibit K1 notebook contains hand printed material that is not comparable to the questioned material appearing on the Exhibit Q1 item.
F8H8YW	Further examinations with a view to possibly determining whether the entry on Q1 was written before or after the entries on page 4 of K1 with which it intersects can be undertaken if required. Examinations with a view to possibly determining who wrote the questioned note can be undertaken on receipt of suitable specimen handwriting [sic] any suspected writer/s. Document Q1 can be examined for the presence of latent fingerprints and, if developed and depending on clarity, comparison with known fingerprints of any suspects. However, such examinations are invasive and should only be undertaken following completion of any necessary further forensic document examinations of the handwriting and sequencing of the entries.
FB28B7	The indented impressions of the q1 note were found in the k1 notebook along with the fracture match of the paper with a segment of paper in the ring binder.
FDN4JW	The tear comparison provides conclusive evidence that Q1 was at one time a single page with the uppermost of the torn spines in K1. Indentations revealed on the page in K1 containing writing shows that Q1 was on top of this page when Q1 was written.
HFNQBR	A handwriting examination of the questioned material appearing in Item Q1 is possible with the submission of known hand printing from any potential subjects. This should include the completion of a standard exemplar form along with multiple repetitions of the questioned material. Non-request hand printing such as course of business writings, personal correspondence, etc., that is comparable to the questioned material may also prove beneficial in this examination.
JRZD24	Had issue with visual/ESDA examinations regarding the notepad, specifically pages following page fringes. Indented impressions were barely visible and ESDA had to be performed multiple times. Also found other extraneous markings/impressions on those same pages.

## TABLE 4

WebCode	Additional Comments
L34P23	K1 has a black line from one side to the other. Q1 has a black dot in the down side border.
LTVMPW	Microscope - There was a black ink mark on the right bottom of the disputed note marked "Q1" that match the res[sic] of the marks on that place/position of the notepad marked "K1".
MEEB92	While a set of ESDA examinations were conducted, it was observed that the physical structure of the K1 booklet hindered the examiner's ability to conduct the best possible examination. Multiple attempts were made, with the booklet being placed on the ESDA platen a number of different ways in order to attempt to gain a clear result. Due to this continued difficulty to obtain clear ESDA results, the ESDA examinations were not completed on the reverse of the page preceding the written page in the notebook, nor the following page.
NADV4	If actual casework, the investigator would have been asked permission to disassemble K1 in order to conduct EDD latent indentation analysis on page 7.
P8B68V	During the technical analysis you can see that the note in question Q1 was positioned in a fourth in the K1 book. Among other special features allowing to demonstrate that questioned sheet Q1 comes fom[sic] the confiscated book K1, correspond to gluing, printed lines and the size of the sheet Q1 opposite other sheets of the book K1; point inking and the same position, seen at the edge bottom of each of the sheets and the presence of ductus or traces of the signs that are detected in the seventh book K1 sheet, which are the product of the pressure exerted by the clerk at the time of writing, whose paths match the hand writings Q1 in terms of topographical distribution, tilt, size and position of the signs in the spaces preset. Even hand writings of seventh the confiscated book sheets presents similar intensity of ink with the hand writings of questionable note Q1, during with the VSC 6000 /HS spectrometric analysis.
QPLJYB	No analysis was performed on K1 Items 1.1 to 1.3 and 1.8.
RAQGWB	Indented impression examination with ESDA was not conducted due to need to preserve evidence for other examiners and sidelight was found to be sufficient in this case.
TCTHW9	A handwriting comparison could be made between the questioned note and comparable repeated hand printing performed by the suspect.
TUATE2	The opinion tendered above is based upon the information and material provided to the examiner, as well as being based upon the specific propositions shown above. Should the information or propositions change, the opinion may also change.
VC26TY	The complete wording 'I WILL KILL YOU' did not appear when checking for indentations due to the fact that two pages after Q1 were torn off and I had a 4th page available to examine as the closest page after Q1.
WADVJX	I recommend that block hand printing of the student who produced this notebook be provided for analysis in order to potentially identify the writer of Q1.
X7KJWX	The edges of the remnants papers in the recovered note pad "K1" matches the edges of the document "K1"[sic]. The black mark at the bottom of the questioned document "Q1" also matches the black marks found in the recovered note pad "K1".
X8GZ9U	Resoectfully[sic] it suggests that the agreement with CTS the Office of the Attorney General of [Country] apply this kind of tests more often because they are a valuable tool to strengthen our procedures. It would be interesting application of evidence realted[sic] to physical alterations and optical study of inks interpreting graphs in the spectrum of light.
YMQ6XY	It is the conclusion of this examiner that Q1 (the torn page) is from K1 - the suspect notebook. There is a black vertical line 1" from the right side of K1 - the notebook that extends vertically down across the pages. A black spot on the Q-1 suspect page aligns with that verticle[sic] line. The torn edges of Q1 the suspect page & page 4 of K1 - the notebook align. Indented writing, although faint, can be seen that correspond with several letters of Q1 the suspect page. Therefore a conclusion of identification is hereby rendered. The torn page (Q1) is from the suspect notebook (K1).

TABLE 4

WebCode	Additional Comments
Z4BGGX	Handwriting specimens completed in an upper case printed style from any suspects could be submitted for comparison with the questioned handwriting. However, its basic nature and limited content may be a limiting factor in any comparison.
Z7J9EY	There is a physical fit between torn edge of Q01 and the first torn page in the book K01 faint impressions of note Q01 on page beginning 3/2/15. Would prefer to remove page for ESDA testing to confirm
ZF6X7Y	The questioned handwritten entries on Exhibit Q1 do appear to be naturally written and contain some identifiable handwriting characteristics though, it may not be sufficient for comparison with a known writer. However, if a handwriting comparison is needed, please submit fifteen to twenty samples of the known writer writing the exact text of the questioned entries along with some samples of normal-course-of-business writings.
ZQRWYP	Torn Edge Methodology
ZXP3C	A handwriting examination and comparison between the questioned handwriting and a suspects specimen handwriting could be of value.

## Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

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### Test No. 15-521: Questioned Documents Examination

DATA MUST BE RECEIVED BY June 08, 2015 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

#### Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB and ANAB. Please select one of the following statements to ensure your data is handled appropriately.

This participant's data is intended for submission to ASCLD/LAB and/or ANAB.  
(Accreditation Release section on the last page must be completed and submitted.)

This participant's data is NOT intended for submission to ASCLD/LAB or ANAB.

#### Online Data Entry

Visit [www.cts-portal.com](http://www.cts-portal.com) to enter your proficiency test results online. If you have any questions please do not hesitate to contact CTS.

#### Scenario:

Police are investigating a written threat directed at a bullied high school student. The victim found a handwritten note left under the windshield wiper of his car, reading "I WILL KILL YOU". The note follows several weeks of verbal harassment by a group of several other students. Investigators are asking you to compare the note with a notepad that was recovered from one of these students and determine if the note could have originated from it.

**Please follow your laboratory's standard protocol for examining questioned document evidence.**

#### Items Submitted (Sample Pack QD):

K1: Notepad recovered from one of the suspected students.

Q1: Threatening note left on the victim's car, reading "I WILL KILL YOU".

#### **1.) Could the questioned note (Q1) have originated from (was once a part of) the notepad (K1) recovered from one of the suspected students?**

(Select from the following list of conclusions and insert the appropriate letter in the space provided in the table. If the wording below differs from the normal wording of your conclusions, adapt these conclusions as best you can and use your preferred wording for question 3.)

- A. The questioned note ORIGINATED from the recovered notepad.
- B. The questioned note PROBABLY ORIGINATED from the recovered notepad.
- C. Cannot be IDENTIFIED or ELIMINATED.
- D. The questioned note PROBABLY DID NOT ORIGINATE from the recovered notepad.
- E. The questioned note DID NOT ORIGINATE from the recovered notepad.

*\*Should the response "C" be used, please document the reason in the Additional Comments section of this data sheet.*

**Q1:** \_\_\_\_\_

**Please return all pages of this data sheet.**

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## Collaborative Testing Services ~ Forensic Testing Program

**RELEASE OF DATA TO ACCREDITATION BODIES**

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **15-521: Questioned Documents Examination**

This release page must be completed and received by **June 8, 2015** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

**ASCLD/LAB RELEASE**

If your lab has been accredited by ASCLD/LAB and you are submitting this data as part of their external proficiency test requirements, have the laboratory's designated individual complete the following.

**The information below must be completed in its entirety for the results to be submitted to ASCLD/LAB.**

ASCLD/LAB Legacy Certificate No. \_\_\_\_\_ ASCLD/LAB International Certificate No. \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Laboratory Name \_\_\_\_\_

Location (City/State) \_\_\_\_\_

**ANAB RELEASE**

If your laboratory maintains its accreditation through ANAB, please complete the following form in its entirety to have your results forwarded.

ANAB Certificate No. \_\_\_\_\_

Signature and Title \_\_\_\_\_ Date \_\_\_\_\_

Laboratory Name \_\_\_\_\_

Location (City/State) \_\_\_\_\_

**Accreditation Release****Return Instructions**

*Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.*

*Questions? Contact us 8 am-4:30 pm EST  
Telephone: +1-571-434-1925  
email: forensics@cts-interlab.com*

**Please return all pages of this data sheet.**

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