The Case of the Vanishing Spellbook

Grade 6 math · Addition, Subtraction, Multiplication, Percentages, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

During the midnight hour at Aethelgard Academy, someone snuck into the Restricted Vault and snatched the Codex of Ancient Runes! Head Librarian Master Pendelton discovered the empty pedestal this morning. Magical clues and glowing residues remain across the grand hall.

1. Solve each math problem. The answer is a number, and the letter beside it is what that number stands for.
2. In the clue boxes, write that letter in every box showing the same number, then read the secret clue.
3. Use each clue to cross suspects off the list. The one suspect left at the end is the culprit!

My answer: the rogue spellcaster is _____

Possible suspects

Cross off a row as each clue rules it out. The one left at the end is the culprit.

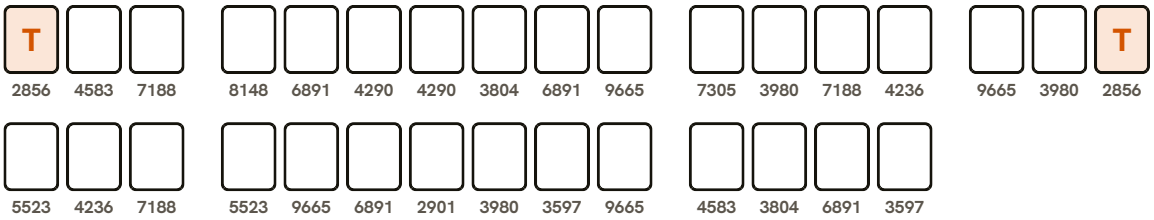
NAME	PRIMARY MAGIC	WAND CORE	WAND GRIP	HAIR COLOR	COUNTER MAGIC
Elian Vance	Levitation	Phoenix feather wand	Left handed grip	Jet black hair	Sunfire potion
Hazel Nightshade	Transmutation	Dragon heartstring wand	Left handed grip	Copper braid	Screaming mandrake
Zephyr Cross	Levitation	Basilisk scale wand	Left handed grip	Silver hair	Sunfire potion
Ignatius Ember	Ice summoning	Basilisk scale wand	Right handed grip	Copper braid	Cold iron chime
Gideon Frost	Levitation	Vampire fang wand	Left handed grip	Copper braid	Screaming mandrake
Flora Starling	Transmutation	Vampire fang wand	Left handed grip	Jet black hair	Screaming mandrake
Valerie Vesper	Transmutation	Basilisk scale wand	Left handed grip	Silver hair	Screaming mandrake
Penelope Pryce	Transmutation	Unicorn hair wand	Left handed grip	Copper braid	Screaming mandrake
Dorothea Blackwood	Levitation	Phoenix feather wand	Right handed grip	Copper braid	Screaming mandrake
Ulric Storm	Transmutation	Vampire fang wand	Left handed grip	Copper braid	Screaming mandrake
Kaelen Ash	Levitation	Phoenix feather wand	Right handed grip	Silver hair	Sunfire potion
Orion Vale	Ice summoning	Dragon heartstring wand	Right handed grip	Jet black hair	Cold iron chime
Alister Finch	Levitation	Dragon heartstring wand	Right handed grip	Copper braid	Cold iron chime
Beatrix Vane	Transmutation	Phoenix feather wand	Left handed grip	Copper braid	Cold iron chime
Wren Whisper	Fire casting	Basilisk scale wand	Left handed grip	Silver hair	Cold iron chime
Quentin Quill	Fire casting	Vampire fang wand	Left handed grip	Jet black hair	Screaming mandrake
Silas Grim	Ice summoning	Vampire fang wand	Left handed grip	Copper braid	Screaming mandrake
Nyssa Ravencroft	Levitation	Basilisk scale wand	Left handed grip	Copper braid	Cold iron chime
Magnus Drake	Levitation	Unicorn hair wand	Right handed grip	Copper braid	Cold iron chime
Thalia Hawthorn	Levitation	Basilisk scale wand	Right handed grip	Jet black hair	Screaming mandrake
Lyra Moon	Ice summoning	Vampire fang wand	Right handed grip	Jet black hair	Sunfire potion

make your own at mathcrackers.com

CLUE 1 Addition

> To trace the villain's initial steps, the apprentice detectives tally up all the glowing rune tracks found near the entrance.

Solve each problem, then write its letter in every clue box that shows the same number.



1980 + 876 = ☐ → T

3236 + 2287 = ☐ → U

3954 + 3234 = ☐ → E

3006 + 4299 = ☐ → D

2446 + 1844 = ☐ → L

4441 + 2450 = ☐ → I

2784 + 1452 = ☐ → S

1736 + 2244 = ☐ → O

2307 + 1290 = ☐ → R

1686 + 1215 = ☐ → C

2688 + 1895 = ☐ → H

1573 + 2231 = ☐ → A

6398 + 3267 = ☐ → N

3633 + 4515 = ☐ → V

Scratch space:

CLUE 2 Subtraction

> Comparing the total number of magic vials before and after the theft reveals how many potions were taken during the escape.

Solve each problem, then write its letter in every clue box that shows the same number.



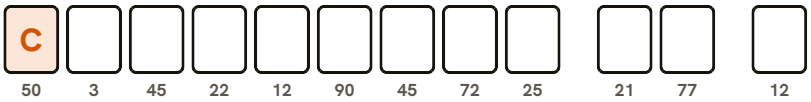
9511 - 4675 = ☐ → L	11670 - 4751 = ☐ → T	6808 - 3671 = ☐ → H
8856 - 3383 = ☐ → M	10832 - 4112 = ☐ → O	3401 - 1725 = ☐ → C
6816 - 4818 = ☐ → R	8353 - 1963 = ☐ → E	6615 - 4307 = ☐ → F
8598 - 2111 = ☐ → U	10070 - 3654 = ☐ → G	9609 - 3556 = ☐ → S
5818 - 1209 = ☐ → A	8381 - 2993 = ☐ → I	5355 - 964 = ☐ → N
9727 - 1936 = ☐ → D	10599 - 2225 = ☐ → K	

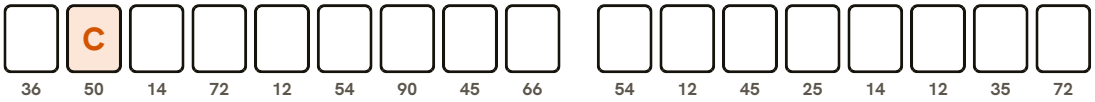
Scratch space:

CLUE 3 Multiplication facts (1-12)

> The mystery solver counts identical bookshelf rows and multiplies them to estimate how many scrolls were disrupted.

Solve each problem, then write its letter in every clue box that shows the same number.





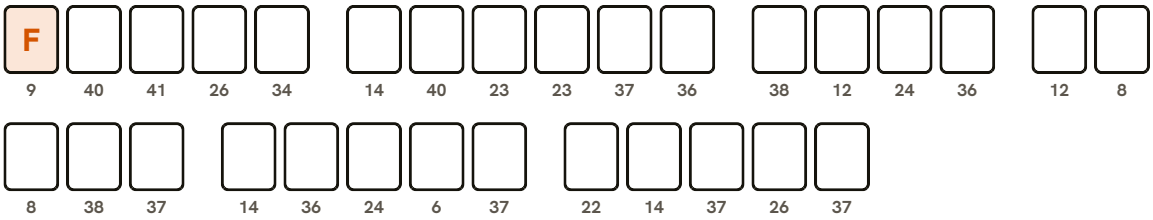
10 × 5 = ☐ → C	5 × 5 = ☐ → D	3 × 7 = ☐ → B
11 × 2 = ☐ → T	1 × 12 = ☐ → A	9 × 10 = ☐ → I
6 × 11 = ☐ → G	12 × 3 = ☐ → S	7 × 11 = ☐ → Y
1 × 3 = ☐ → O	6 × 9 = ☐ → M	9 × 5 = ☐ → N
7 × 5 = ☐ → K	9 × 8 = ☐ → E	
		2 × 7 = ☐ → R

Scratch space:

CLUE 4 Percentages

> A diagnostic charm measures what percentage of the vault's protective ward was drained by the intruder's wand.

Solve each problem, then write its letter in every clue box that shows the same number.



60% of 15 = ☐ → F

10% of 240 = ☐ → I

50% of 72 = ☐ → R

50% of 52 = ☐ → N

25% of 24 = ☐ → M

10% of 230 = ☐ → P

5% of 240 = ☐ → A

20% of 70 = ☐ → C

50% of 76 = ☐ → H

50% of 16 = ☐ → T

20% of 185 = ☐ → E

10% of 340 = ☐ → D

20% of 205 = ☐ → U

40% of 100 = ☐ → O

20% of 110 = ☐ → S

Scratch space:

CLUE 5 Division facts (1-12) - the last clue

> The lead detective divides the total count of scattered silver scales equally among the suspect tables to narrow the search.

First solve each problem. Then find each answer in the numbered list below and cross that sentence out. One sentence will be left - that is exactly what the villain did!

Step 1 - solve these:

9 ÷ 3 = ☐	22 ÷ 11 = ☐	72 ÷ 12 = ☐	25 ÷ 5 = ☐	33 ÷ 3 = ☐
96 ÷ 12 = ☐	99 ÷ 11 = ☐	48 ÷ 12 = ☐	60 ÷ 5 = ☐	100 ÷ 10 = ☐
35 ÷ 5 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain froze the library doors shut, then cast dark hexes with a vampire wand.
2. The villain turned brass doorknobs into frogs, then cast dark hexes with a vampire wand.
3. The villain lifted heavy stone statues, then cast dark hexes with a vampire wand.
4. The villain cast a blazing fire spell, then channeled power with a phoenix wand.
5. The villain cast a blazing fire spell, then waved a quiet unicorn wand.
6. The villain turned brass doorknobs into frogs, then blasted sparks with a dragon wand.
7. The villain turned brass doorknobs into frogs, then waved a quiet unicorn wand.
8. The villain cast a blazing fire spell, then blasted sparks with a dragon wand.
9. The villain created tricky illusion mirrors, then waved a quiet unicorn wand.
10. The villain lifted heavy stone statues, then waved a quiet unicorn wand.
11. The villain froze the library doors shut, then channeled power with a phoenix wand.
12. The villain turned brass doorknobs into frogs, then stole magic with a basilisk wand.

TEACHER / PARENT

Answer Key

The Case of the Vanishing Spellbook

Culprit: Silas Grim

Ice summoning · Vampire fang wand · Left handed grip · Copper braid · Screaming mandrake

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT USE UNICORN HAIR"

1980 + 876 = 2856 (T) · 3236 + 2287 = 5523 (U) · 3954 + 3234 = 7188 (E) · 3006 + 4299 = 7305 (D) · 2446 + 1844 = 4290 (L) · 4441 + 2450 = 6891 (I) · 2784 + 1452 = 4236 (S) · 1736 + 2244 = 3980 (O) · 2307 + 1290 = 3597 (R) · 1686 + 1215 = 2901 (C) · 2688 + 1895 = 4583 (H) · 1573 + 2231 = 3804 (A) · 6398 + 3267 = 9665 (N) · 3633 + 4515 = 8148 (V)

Clue 2 (Subtraction): "LEFT HANDED INK SMUDGES ON THE SCROLL"

9511 - 4675 = 4836 (L) · 11670 - 4751 = 6919 (T) · 6808 - 3671 = 3137 (H) · 8856 - 3383 = 5473 (M) · 10832 - 4112 = 6720 (O) · 3401 - 1725 = 1676 (C) · 6816 - 4818 = 1998 (R) · 8353 - 1963 = 6390 (E) · 6615 - 4307 = 2308 (F) · 8598 - 2111 = 6487 (U) · 10070 - 3654 = 6416 (G) · 9609 - 3556 = 6053 (S) · 5818 - 1209 = 4609 (A) · 8381 - 2993 = 5388 (I) · 5355 - 964 = 4391 (N) · 9727 - 1936 = 7791 (D) · 10599 - 2225 = 8374 (K)

Clue 3 (Multiplication facts (1-12)): "CONTAINED BY A SCREAMING MANDRAKE"

10 × 5 = 50 (C) · 5 × 5 = 25 (D) · 3 × 7 = 21 (B) · 11 × 2 = 22 (T) · 1 × 12 = 12 (A) · 9 × 10 = 90 (I) · 6 × 11 = 66 (G) · 12 × 3 = 36 (S) · 7 × 11 = 77 (Y) · 1 × 3 = 3 (O) · 6 × 9 = 54 (M) · 9 × 5 = 45 (N) · 2 × 7 = 14 (R) · 7 × 5 = 35 (K) · 9 × 8 = 72 (E)

Clue 4 (Percentages): "FOUND COPPER HAIR AT THE CRIME SCENE"

60% of 15 = 9 (F) · 10% of 240 = 24 (I) · 50% of 72 = 36 (R) · 50% of 52 = 26 (N) · 25% of 24 = 6 (M) · 10% of 230 = 23 (P) · 5% of 240 = 12 (A) · 20% of 70 = 14 (C) · 50% of 76 = 38 (H) · 50% of 16 = 8 (T) · 20% of 185 = 37 (E) · 10% of 340 = 34 (D) · 20% of 205 = 41 (U) · 40% of 100 = 40 (O) · 20% of 110 = 22 (S)

Clue 5 (Division facts (1-12)): surviving statement is box 1 → Silas Grim

9 ÷ 3 = 3 · 22 ÷ 11 = 2 · 72 ÷ 12 = 6 · 25 ÷ 5 = 5 · 33 ÷ 3 = 11 · 96 ÷ 12 = 8 · 99 ÷ 11 = 9 · 48 ÷ 12 = 4 · 60 ÷ 5 = 12 · 100 ÷ 10 = 10 · 35 ÷ 5 = 7