



The Great Halloween Pumpkin Heist

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 3-4

Detective: _____ Date: _____

Someone snuck into the Spooksville Harvest Carnival and snatched the Golden Pumpkin trophy right before the big contest! The detective squad must solve five mathematical clues to uncover who did it before midnight.

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 pumpkin thief is _____

Possible suspects

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

NAME	MAGIC TRICK	COSTUME GEAR	HANDEDNESS	WIG COLOR	FRIGHTENED BY
Stella Spooky	Spectral Glow	Spider Ring	Right Handed	Orange Wig	Black Cats
Gwen Ghoulish	Levitation Spell	Candy Sack	Left Handed	Orange Wig	Garlic Bread
Rory Raven	Ghost Whisper	Candy Sack	Right Handed	Green Wig	Black Cats
Poe Pumpkin	Ghost Whisper	Spider Ring	Right Handed	Green Wig	Garlic Bread
Una Umbra	Ghost Whisper	Glow Wand	Left Handed	Purple Wig	Garlic Bread
Quinn Quiver	Shadow Cloak	Candy Sack	Left Handed	Purple Wig	Garlic Bread
Willa Witch	Bat Swarm	Spider Ring	Left Handed	Green Wig	Black Cats
Ivy Imp	Ghost Whisper	Candy Sack	Right Handed	Orange Wig	Black Cats
Yara Yawn	Spectral Glow	Skeleton Key	Left Handed	Green Wig	Garlic Bread
Leo Lantern	Shadow Cloak	Glow Wand	Left Handed	Purple Wig	Garlic Bread
Clara Cobweb	Shadow Cloak	Witch Broom	Left Handed	Purple Wig	Garlic Bread
Toby Trick	Bat Swarm	Glow Wand	Left Handed	Green Wig	Black Cats
Opal Owl	Levitation Spell	Glow Wand	Right Handed	Orange Wig	Black Cats
Kira Kettles	Spectral Glow	Candy Sack	Left Handed	Purple Wig	Bright Flashlights
Vince Vampire	Ghost Whisper	Spider Ring	Right Handed	Purple Wig	Bright Flashlights
Elsbeth Moon	Spectral Glow	Skeleton Key	Right Handed	Orange Wig	Black Cats
Felix Fog	Levitation Spell	Spider Ring	Left Handed	Purple Wig	Garlic Bread
Xander Shadow	Ghost Whisper	Spider Ring	Left Handed	Purple Wig	Black Cats
Jasper Jinx	Levitation Spell	Spider Ring	Right Handed	Purple Wig	Garlic Bread
Niles Night	Levitation Spell	Glow Wand	Right Handed	Purple Wig	Garlic Bread
Hector Haunt	Ghost Whisper	Glow Wand	Left Handed	Orange Wig	Garlic Bread

CLUE 1 Percentages

The ghost radar displays a percentage level of spooky magic left at the crime scene.

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

T																T
4	3	2	12	38	17	17	28	38	20	6	16	2	22	20	16	4
						T										
39	22	2	28	25	38	4	45	3	10	18	16	16	32			

$25\% \text{ of } 16 = \square \rightarrow \boxed{\text{T}}$

$50\% \text{ of } 32 = \square \rightarrow \boxed{\text{O}}$

$40\% \text{ of } 70 = \square \rightarrow \boxed{\text{A}}$

$20\% \text{ of } 60 = \square \rightarrow \boxed{\text{V}}$

$50\% \text{ of } 40 = \square \rightarrow \boxed{\text{N}}$

$40\% \text{ of } 25 = \square \rightarrow \boxed{\text{B}}$

$50\% \text{ of } 64 = \square \rightarrow \boxed{\text{M}}$

$10\% \text{ of } 30 = \square \rightarrow \boxed{\text{H}}$

$5\% \text{ of } 440 = \square \rightarrow \boxed{\text{S}}$

$5\% \text{ of } 780 = \square \rightarrow \boxed{\text{U}}$

$25\% \text{ of } 152 = \square \rightarrow \boxed{\text{I}}$

$25\% \text{ of } 100 = \square \rightarrow \boxed{\text{W}}$

$50\% \text{ of } 4 = \square \rightarrow \boxed{\text{E}}$

$50\% \text{ of } 36 = \square \rightarrow \boxed{\text{R}}$

$25\% \text{ of } 180 = \square \rightarrow \boxed{\text{C}}$

$10\% \text{ of } 170 = \square \rightarrow \boxed{\text{L}}$

$40\% \text{ of } 15 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 2 Exponents

A monster energy gauge measures power levels that grow in repeated power steps.

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

W									W								
144	49	343	4	216	225	225	225	27	144	343	169	216	9	64	225	216	

343	169	216	49	100	8	216	243	343	169	27	4	400	

$12^2 = \square \rightarrow$ W	$2^2 = \square \rightarrow$ N	$7^2 = \square \rightarrow$ I	$10^2 = \square \rightarrow$ R
$20^2 = \square \rightarrow$ D	$13^2 = \square \rightarrow$ H	$3^5 = \square \rightarrow$ F	$3^2 = \square \rightarrow$ M
$2^3 = \square \rightarrow$ L	$3^3 = \square \rightarrow$ A	$8^2 = \square \rightarrow$ U	$7^3 = \square \rightarrow$ T
$15^2 = \square \rightarrow$ S	$6^3 = \square \rightarrow$ E		

Scratch space:

CLUE 3
Order of operations

A step by step cauldron recipe must be calculated in exact mathematical order.

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

T																	
49	6	41	16	29	53	53	27	29	63	47	53	41	52	47	78	45	77

70	27	78	53	29	64	28	78	41	27	52

$11 \times 7 - 28 = \square \rightarrow \text{**T**}$

$6 \times 12 - 9 = \square \rightarrow \text{**N**}$

$2 \times 8 - 10 = \square \rightarrow \text{**H**}$

$15 + 2 \times 7 = \square \rightarrow \text{**I**}$

$7 \times 6 - 14 = \square \rightarrow \text{**B**}$

$8 \times 12 - 19 = \square \rightarrow \text{**M**}$

$8 \times 12 - 26 = \square \rightarrow \text{**G**}$

$36 + 4 \times 4 = \square \rightarrow \text{**D**}$

$35 + 3 \times 6 = \square \rightarrow \text{**L**}$

$11 \times 2 - 6 = \square \rightarrow \text{**V**}$

$36 + 3 \times 3 = \square \rightarrow \text{**O**}$

$4 \times 7 - 1 = \square \rightarrow \text{**A**}$

$22 + 8 \times 7 = \square \rightarrow \text{**R**}$

$36 + 7 \times 4 = \square \rightarrow \text{**C**}$

$23 + 8 \times 3 = \square \rightarrow \text{**F**}$

$6 + 5 \times 7 = \square \rightarrow \text{**E**}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The mystery solver counts equal rows of carved jack o lanterns along the path.

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

P			P																
42	100	32	42	15	120	132	55	25	30	55	81	120	32	24	132	120	32	120	
30	44	100	5	22	64	84	84	99	120	24	88	120	5	120					

$6 \times 7 = \square \rightarrow \text{P}$

$4 \times 6 = \square \rightarrow \text{S}$

$5 \times 11 = \square \rightarrow \text{I}$

$5 \times 5 = \square \rightarrow \text{G}$

$5 \times 1 = \square \rightarrow \text{N}$

$10 \times 10 = \square \rightarrow \text{U}$

$5 \times 3 = \square \rightarrow \text{L}$

$9 \times 9 = \square \rightarrow \text{B}$

$8 \times 8 = \square \rightarrow \text{A}$

$11 \times 2 = \square \rightarrow \text{D}$

$12 \times 10 = \square \rightarrow \text{E}$

$8 \times 4 = \square \rightarrow \text{R}$

$10 \times 3 = \square \rightarrow \text{F}$

$11 \times 9 = \square \rightarrow \text{H}$

$7 \times 12 = \square \rightarrow \text{T}$

$4 \times 11 = \square \rightarrow \text{O}$

$11 \times 12 = \square \rightarrow \text{W}$

$11 \times 8 = \square \rightarrow \text{C}$

Scratch space:

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

A large haul of halloween candy must be divided equally among suspect groups.

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:

$36 \div 3 = \boxed{}$

$12 \div 12 = \boxed{}$

$56 \div 7 = \boxed{}$

$33 \div 11 = \boxed{}$

$20 \div 4 = \boxed{}$

$24 \div 12 = \boxed{}$

$63 \div 9 = \boxed{}$

$60 \div 6 = \boxed{}$

$81 \div 9 = \boxed{}$

$4 \div 1 = \boxed{}$

$22 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain cast a levitation spell, then flashed a spider ring.
2. The villain summoned a bat swarm, then grabbed a candy sack.
3. The villain draped a shadow cloak, then turned a skeleton key.
4. The villain used a ghost whisper, then turned a skeleton key.
5. The villain used a ghost whisper, then mounted a witch broom.
6. The villain draped a shadow cloak, then swung a glow wand.
7. The villain activated a spectral glow, then grabbed a candy sack.
8. The villain draped a shadow cloak, then grabbed a candy sack.
9. The villain summoned a bat swarm, then turned a skeleton key.
10. The villain draped a shadow cloak, then flashed a spider ring.
11. The villain used a ghost whisper, then flashed a spider ring.
12. The villain used a ghost whisper, then swung a glow wand.

Answer Key

The Great Halloween Pumpkin Heist

Culprit: Leo Lantern

Shadow Cloak · Glow Wand · Left Handed · Purple Wig · Garlic Bread

Trail: Start 21 → Clue 1 20 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE VILLAIN DOES NOT USE A WITCH BROOM"

25% of 16 = 4 (T) · 50% of 32 = 16 (O) · 40% of 70 = 28 (A) · 20% of 60 = 12 (V) · 50% of 40 = 20 (N) · 40% of 25 = 10 (B) · 50% of 64 = 32 (M) · 10% of 30 = 3 (H) · 5% of 440 = 22 (S) · 5% of 780 = 39 (U) · 25% of 152 = 38 (I) · 25% of 100 = 25 (W) · 50% of 4 = 2 (E) · 50% of 36 = 18 (R) · 25% of 180 = 45 (C) · 10% of 170 = 17 (L) · 40% of 15 = 6 (D)

Clue 2 (Exponents): "WITNESS SAW THEM USE THEIR LEFT HAND"

$12^2 = 144$ (W) · $2^2 = 4$ (N) · $7^2 = 49$ (I) · $10^2 = 100$ (R) · $20^2 = 400$ (D) · $13^2 = 169$ (H) · $3^5 = 243$ (F) · $3^2 = 9$ (M) · $2^3 = 8$ (L) · $3^3 = 27$ (A) · $8^2 = 64$ (U) · $7^3 = 343$ (T) · $15^2 = 225$ (S) · $6^3 = 216$ (E)

Clue 3 (Order of operations): "THE VILLAIN FLED FROM GARLIC BREAD"

$11 \times 7 - 28 = 49$ (T) · $6 \times 12 - 9 = 63$ (N) · $2 \times 8 - 10 = 6$ (H) · $15 + 2 \times 7 = 29$ (I) · $7 \times 6 - 14 = 28$ (B) · $8 \times 12 - 19 = 77$ (M) · $8 \times 12 - 26 = 70$ (G) · $36 + 4 \times 4 = 52$ (D) · $35 + 3 \times 6 = 53$ (L) · $11 \times 2 - 6 = 16$ (V) · $36 + 3 \times 3 = 45$ (O) · $4 \times 7 - 1 = 27$ (A) · $22 + 8 \times 7 = 78$ (R) · $36 + 7 \times 4 = 64$ (C) · $23 + 8 \times 3 = 47$ (F) · $6 + 5 \times 7 = 41$ (E)

Clue 4 (Multiplication facts (1-12)): "PURPLE WIG FIBERS WERE FOUND AT THE SCENE"

$6 \times 7 = 42$ (P) · $4 \times 6 = 24$ (S) · $5 \times 11 = 55$ (I) · $5 \times 5 = 25$ (G) · $5 \times 1 = 5$ (N) · $10 \times 10 = 100$ (U) · $5 \times 3 = 15$ (L) · $9 \times 9 = 81$ (B) · $8 \times 8 = 64$ (A) · $11 \times 2 = 22$ (D) · $12 \times 10 = 120$ (E) · $8 \times 4 = 32$ (R) · $10 \times 3 = 30$ (F) · $11 \times 9 = 99$ (H) · $7 \times 12 = 84$ (T) · $4 \times 11 = 44$ (O) · $11 \times 12 = 132$ (W) · $11 \times 8 = 88$ (C)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Leo Lantern

$36 \div 3 = 12$ · $12 \div 12 = 1$ · $56 \div 7 = 8$ · $33 \div 11 = 3$ · $20 \div 4 = 5$ · $24 \div 12 = 2$ · $63 \div 9 = 7$ · $60 \div 6 = 10$ · $81 \div 9 = 9$ · $4 \div 1 = 4$ · $22 \div 2 = 11$