The Midnight Monster Mash Mystery

Grade 5 math · Addition, Subtraction, Multiplication, Fractions of a number, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone crashed the Spooksville Manor Halloween party and stole the Golden Pumpkin Trophy! Solve the math clues to uncover who did it.

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 Ghastly Mischief-Maker is _____

Possible suspects

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

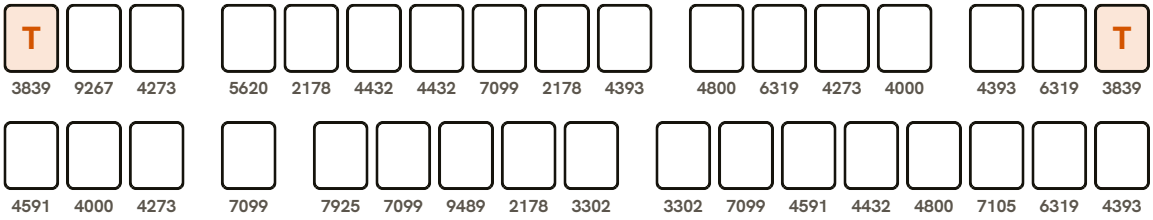
NAME	MONSTER TYPE	HALLOWEEN GEAR	DOMINANT HAND	FUR COLOR	SPOOKY WEAKNESS
Bram Stoker	Ghost	Magic Cauldron	Left Handed	Pumpkin Orange	Squeaky Toys
Phantom Phil	Zombie	Silver Whistle	Left Handed	Pumpkin Orange	Garlic Bread
Spooky Sam	Zombie	Silver Whistle	Right Handed	Neon Green	Squeaky Toys
Shadow Sean	Vampire	Silver Whistle	Left Handed	Pumpkin Orange	Squeaky Toys
Count Vlad	Vampire	Silver Whistle	Right Handed	Pumpkin Orange	Garlic Bread
Wolfie Smith	Swamp Beast	Flying Broom	Left Handed	Pumpkin Orange	Garlic Bread
Luna Howl	Zombie	Silver Whistle	Left Handed	Pumpkin Orange	Bright Flashlights
Fang Foot	Werewolf	Flying Broom	Left Handed	Pumpkin Orange	Bright Flashlights
Mystic Molly	Swamp Beast	Silver Whistle	Left Handed	Pumpkin Orange	Garlic Bread
Mummy Boris	Vampire	Trick Bag	Right Handed	Pumpkin Orange	Garlic Bread
Pixie Pete	Werewolf	Trick Bag	Left Handed	Midnight Black	Bright Flashlights
Spirit Sarah	Ghost	Magic Cauldron	Left Handed	Midnight Black	Bright Flashlights
Draco Fang	Swamp Beast	Flying Broom	Right Handed	Neon Green	Squeaky Toys
Swampy Sam	Werewolf	Magic Cauldron	Left Handed	Pumpkin Orange	Garlic Bread
Batty Betty	Vampire	Magic Cauldron	Right Handed	Midnight Black	Garlic Bread
Haunt Harry	Swamp Beast	Glowing Lantern	Left Handed	Midnight Black	Garlic Bread
Goblin Greg	Zombie	Magic Cauldron	Left Handed	Midnight Black	Squeaky Toys
Fang Fiona	Werewolf	Flying Broom	Right Handed	Midnight Black	Bright Flashlights
Igor Spike	Zombie	Magic Cauldron	Left Handed	Neon Green	Squeaky Toys
Ghostly Gemma	Vampire	Silver Whistle	Left Handed	Pumpkin Orange	Garlic Bread
Ghoul Gabe	Ghost	Trick Bag	Right Handed	Midnight Black	Squeaky Toys

make your own at mathcrackers.com

CLUE 1 Addition

We counted the candy corn collected at the front door to unlock our first clue.

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



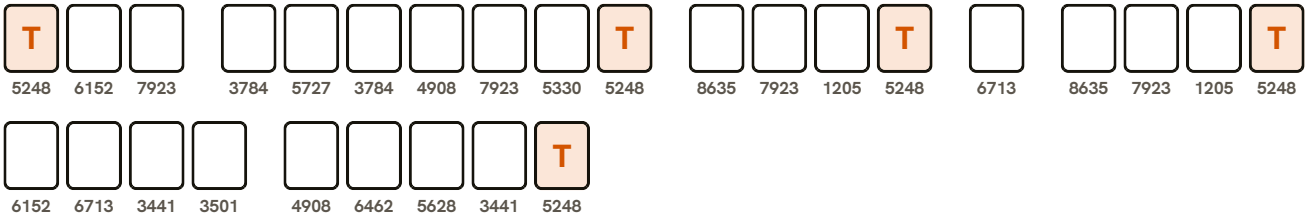
2255 + 1584 = ☐ → T	2161 + 4938 = ☐ → A	1274 + 904 = ☐ → I
3056 + 1744 = ☐ → D	1952 + 2639 = ☐ → U	3277 + 5990 = ☐ → H
3122 + 2498 = ☐ → V	1953 + 2479 = ☐ → L	4567 + 3358 = ☐ → M
2245 + 1057 = ☐ → C	2174 + 1826 = ☐ → S	2542 + 4563 = ☐ → R
3488 + 6001 = ☐ → G	1521 + 2872 = ☐ → N	2296 + 1977 = ☐ → E
2718 + 3601 = ☐ → O		

Scratch space:

CLUE 2 Subtraction

We checked how many glow sticks were missing from the supply box.

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



8228 - 2980 = ☐ → T

7768 - 2860 = ☐ → P

7300 - 3859 = ☐ → N

11829 - 3194 = ☐ → L

4889 - 1105 = ☐ → S

5328 - 4123 = ☐ → F

9839 - 3377 = ☐ → R

6617 - 465 = ☐ → H

9282 - 2569 = ☐ → A

11777 - 3854 = ☐ → E

4838 - 1337 = ☐ → D

6571 - 844 = ☐ → U

8530 - 2902 = ☐ → I

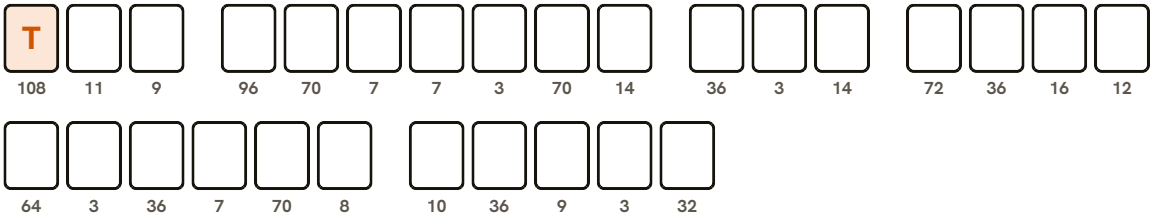
5972 - 642 = ☐ → C

Scratch space:

CLUE 3 Multiplication facts (1-12)

> We searched five equal rows of spooky pumpkins in the haunted garden.

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



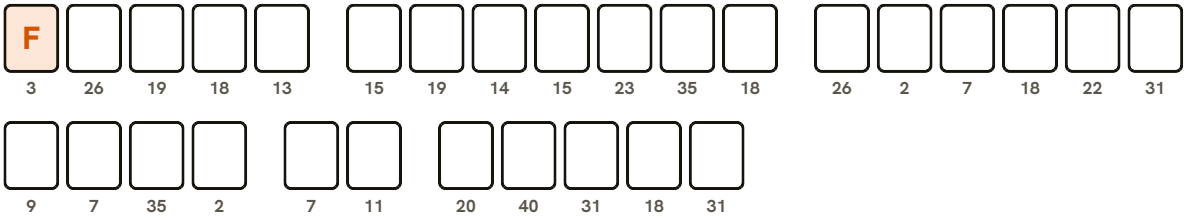
9 × 12 = ☐ → T	1 × 7 = ☐ → L	4 × 2 = ☐ → C	
11 × 1 = ☐ → H	8 × 8 = ☐ → G	4 × 4 = ☐ → O	2 × 6 = ☐ → M
12 × 8 = ☐ → V	2 × 5 = ☐ → B	7 × 2 = ☐ → N	1 × 3 = ☐ → A
4 × 9 = ☐ → R	7 × 10 = ☐ → I	9 × 1 = ☐ → E	8 × 4 = ☐ → D
8 × 9 = ☐ → F			

Scratch space:

CLUE 4 Fractions of a number

We figured out what fraction of the magic potion bottles were tipped over.

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



2/8 of 12 = ☐ → F

1/3 of 93 = ☐ → E

2/4 of 14 = ☐ → A

2/10 of 70 = ☐ → M

4/10 of 50 = ☐ → S

1/4 of 104 = ☐ → O

1/3 of 66 = ☐ → G

4/8 of 46 = ☐ → K

9/10 of 10 = ☐ → H

3/10 of 50 = ☐ → P

1/4 of 52 = ☐ → D

1/2 of 4 = ☐ → R

2/10 of 55 = ☐ → T

2/5 of 100 = ☐ → C

1/5 of 90 = ☐ → N

5/6 of 42 = ☐ → I

5/10 of 38 = ☐ → U

Scratch space:

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

> We divided the leftover trick or treat bags equally among the detectives.

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:

12 ÷ 1 = ☐	8 ÷ 4 = ☐	45 ÷ 9 = ☐	48 ÷ 12 = ☐	7 ÷ 1 = ☐
30 ÷ 5 = ☐	18 ÷ 2 = ☐	96 ÷ 12 = ☐	120 ÷ 12 = ☐	18 ÷ 6 = ☐
132 ÷ 12 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain stumbled past cobwebs, then blew a loud silver whistle.
2. The villain splashed through slime, then swept away on a flying broom.
3. The villain rattled spooky chains, then stirred up a magic cauldron.
4. The villain floated through walls, then lit the dark with a glowing lantern.
5. The villain floated through walls, then blew a loud silver whistle.
6. The villain splashed through slime, then stirred up a magic cauldron.
7. The villain howled at the moon, then grabbed a trick bag.
8. The villain floated through walls, then swept away on a flying broom.
9. The villain splashed through slime, then grabbed a trick bag.
10. The villain floated through walls, then grabbed a trick bag.
11. The villain stumbled past cobwebs, then stirred up a magic cauldron.
12. The villain splashed through slime, then blew a loud silver whistle.

TEACHER / PARENT

Answer Key

The Midnight Monster Mash Mystery

Culprit: Phantom Phil

Zombie · Silver Whistle · Left Handed · Pumpkin Orange · Garlic Bread

Trail: Start 21 → Clue 1 15 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT USE A MAGIC CAULDRON"

2255 + 1584 = 3839 (T) · 2161 + 4938 = 7099 (A) · 1274 + 904 = 2178 (I) · 3056 + 1744 = 4800 (D) · 1952 + 2639 = 4591 (U) · 3277 + 5990 = 9267 (H) · 3122 + 2498 = 5620 (V) · 1953 + 2479 = 4432 (L) · 4567 + 3358 = 7925 (M) · 2245 + 1057 = 3302 (C) · 2174 + 1826 = 4000 (S) · 2542 + 4563 = 7105 (R) · 3488 + 6001 = 9489 (G) · 1521 + 2872 = 4393 (N) · 2296 + 1977 = 4273 (E) · 2718 + 3601 = 6319 (O)

Clue 2 (Subtraction): "THE SUSPECT LEFT A LEFT HAND PRINT"

8228 - 2980 = 5248 (T) · 7768 - 2860 = 4908 (P) · 7300 - 3859 = 3441 (N) · 11829 - 3194 = 8635 (L) · 4889 - 1105 = 3784 (S) · 5328 - 4123 = 1205 (F) · 9839 - 3377 = 6462 (R) · 6617 - 465 = 6152 (H) · 9282 - 2569 = 6713 (A) · 11777 - 3854 = 7923 (E) · 4838 - 1337 = 3501 (D) · 6571 - 844 = 5727 (U) · 8530 - 2902 = 5628 (I) · 5972 - 642 = 5330 (C)

Clue 3 (Multiplication facts (1-12)): "THE VILLAIN RAN FROM GARLIC BREAD"

9 × 12 = 108 (T) · 1 × 7 = 7 (L) · 4 × 2 = 8 (C) · 11 × 1 = 11 (H) · 8 × 8 = 64 (G) · 4 × 4 = 16 (O) · 2 × 6 = 12 (M) · 12 × 8 = 96 (V) · 2 × 5 = 10 (B) · 7 × 2 = 14 (N) · 1 × 3 = 3 (A) · 4 × 9 = 36 (R) · 7 × 10 = 70 (I) · 9 × 1 = 9 (E) · 8 × 4 = 32 (D) · 8 × 9 = 72 (F)

Clue 4 (Fractions of a number): "FOUND PUMPKIN ORANGE HAIR AT SCENE"

2/8 of 12 = 3 (F) · 1/3 of 93 = 31 (E) · 2/4 of 14 = 7 (A) · 2/10 of 70 = 14 (M) · 4/10 of 50 = 20 (S) · 1/4 of 104 = 26 (O) · 1/3 of 66 = 22 (G) · 4/8 of 46 = 23 (K) · 9/10 of 10 = 9 (H) · 3/10 of 50 = 15 (P) · 1/4 of 52 = 13 (D) · 1/2 of 4 = 2 (R) · 2/10 of 55 = 11 (T) · 2/5 of 100 = 40 (C) · 1/5 of 90 = 18 (N) · 5/6 of 42 = 35 (I) · 5/10 of 38 = 19 (U)

Clue 5 (Division facts (1-12)): surviving statement is box 1 → Phantom Phil

12 ÷ 1 = 12 · 8 ÷ 4 = 2 · 45 ÷ 9 = 5 · 48 ÷ 12 = 4 · 7 ÷ 1 = 7 · 30 ÷ 5 = 6 · 18 ÷ 2 = 9 · 96 ÷ 12 = 8 · 120 ÷ 12 = 10 · 18 ÷ 6 = 3 · 132 ÷ 12 = 11