The Halloween Festival Mystery

Grade 4 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone replaced all the prize candy with fake foam blocks at the Halloween festival! Detective, examine the clues and stop the prankster 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 Festival Prankster is _____

Possible suspects

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

NAME	SPOOKY GADGET	COSTUME SUIT	WAND HAND	WIG COLOR	TRICK BANISHER
Spooky Sam	Pumpkin Launcher	Bat Wings	Left Handed	Purple Hair	Garlic Spray
Witchy Wendy	Pumpkin Launcher	Skeleton Suit	Left Handed	Green Hair	Party Horn
Skeleton Sue	Slime Sprayer	Skeleton Suit	Right Handed	Orange Hair	Flashlight Beam
Ghostly Grace	Pumpkin Launcher	Shadow Shroud	Left Handed	Purple Hair	Flashlight Beam
Creepy Clara	Fog Machine	Glow Cloak	Right Handed	Purple Hair	Party Horn
Bony Bob	Pumpkin Launcher	Mummy Wrap	Left Handed	Green Hair	Flashlight Beam
Vampire Vinnie	Slime Sprayer	Skeleton Suit	Right Handed	Green Hair	Party Horn
Zombie Zack	Fog Machine	Skeleton Suit	Left Handed	Green Hair	Flashlight Beam
Jack Lantern	Slime Sprayer	Glow Cloak	Left Handed	Orange Hair	Garlic Spray
Cobweb Carl	Fog Machine	Glow Cloak	Right Handed	Orange Hair	Party Horn
Specter Tim	Web Cannon	Glow Cloak	Right Handed	Orange Hair	Party Horn
Eerie Emma	Fog Machine	Glow Cloak	Right Handed	Green Hair	Garlic Spray
Goblin Greg	Web Cannon	Glow Cloak	Left Handed	Orange Hair	Party Horn
Mummy Mark	Web Cannon	Skeleton Suit	Left Handed	Purple Hair	Party Horn
Frankie Stein	Pumpkin Launcher	Bat Wings	Left Handed	Purple Hair	Party Horn
Broomstick Bella	Bat Blaster	Glow Cloak	Left Handed	Green Hair	Garlic Spray
Phantom Pete	Pumpkin Launcher	Mummy Wrap	Left Handed	Purple Hair	Party Horn
Monster Molly	Web Cannon	Mummy Wrap	Left Handed	Purple Hair	Party Horn
Haunted Harry	Bat Blaster	Glow Cloak	Left Handed	Purple Hair	Party Horn
Howling Hank	Slime Sprayer	Mummy Wrap	Left Handed	Green Hair	Garlic Spray
Count Vlad	Bat Blaster	Bat Wings	Left Handed	Purple Hair	Party Horn

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CLUE 1 Multiplication facts (1-12)

> You find rows of pumpkin crates neatly stacked near the stage.

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

T																T	
1	11	88	77	84	55	55	110	84	48	2	49	88	27	48	49	1	

12	88	110	44	110	14	15	14	14	22	12	44	110	30

1 × 1 = ☐ → T

11 × 10 = ☐ → A

7 × 7 = ☐ → O

2 × 1 = ☐ → D

5 × 3 = ☐ → U

7 × 2 = ☐ → M

3 × 9 = ☐ → S

11 × 7 = ☐ → V

2 × 11 = ☐ → Y

6 × 5 = ☐ → P

8 × 11 = ☐ → E

5 × 11 = ☐ → L

11 × 4 = ☐ → R

6 × 2 = ☐ → W

7 × 12 = ☐ → I

12 × 4 = ☐ → N

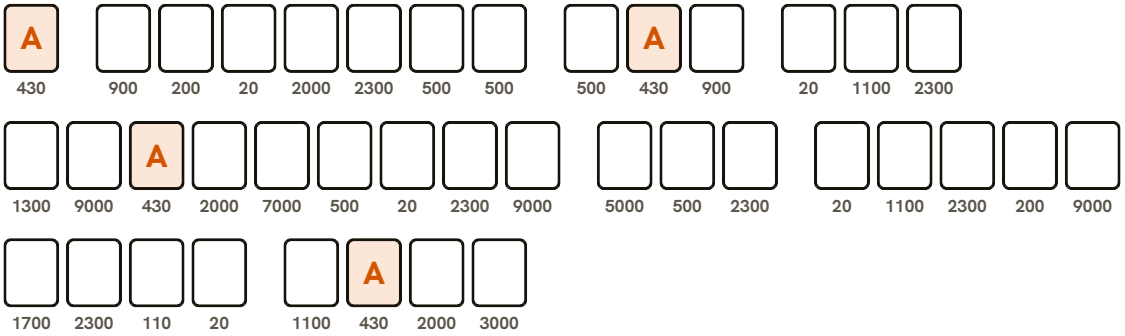
1 × 11 = ☐ → H

Scratch space:

CLUE 2 Rounding

> The haunted radar screen blinks with an estimated glow count.

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



Round 429 to the nearest ten ☐ → **A**

Round 537 to the nearest hundred ☐ → **S**

Round 897 to the nearest hundred ☐ → **W**

Round 1,079 to the nearest hundred ☐ → **H**

Round 1,535 to the nearest thousand ☐ → **N**

Round 2,757 to the nearest thousand ☐ → **D**

Round 19 to the nearest ten ☐ → **T**

Round 5,156 to the nearest thousand ☐ → **U**

Round 9,308 to the nearest thousand ☐ → **R**

Round 1,307 to the nearest hundred ☐ → **P**

Round 192 to the nearest hundred ☐ → **I**

Round 111 to the nearest ten ☐ → **F**

Round 1,673 to the nearest hundred ☐ → **L**

Round 2,289 to the nearest hundred ☐ → **E**

Round 7,456 to the nearest thousand ☐ → **K**

Scratch space:

CLUE 3 Addition

You gather all the spilled party favors into one big pile.

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



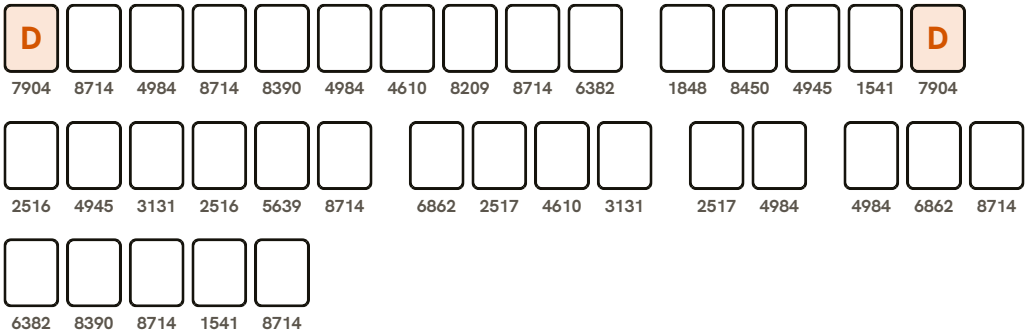
4465 + 2699 = ☐ → T	3071 + 2159 = ☐ → E	3160 + 2913 = ☐ → A
5398 + 3682 = ☐ → W	1440 + 3083 = ☐ → P	1647 + 3628 = ☐ → I
2117 + 2468 = ☐ → R	2195 + 2677 = ☐ → D	2337 + 3575 = ☐ → H
2542 + 2286 = ☐ → U	2841 + 1962 = ☐ → O	814 + 1229 = ☐ → L
2135 + 1328 = ☐ → C	4957 + 4405 = ☐ → Y	940 + 1096 = ☐ → V
2918 + 5105 = ☐ → S	1846 + 3351 = ☐ → B	3182 + 5672 = ☐ → N

Scratch space:

CLUE 4 Subtraction

You compare the missing glowing bats to the total in the storehouse.

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



8385 - 481 = ☐ → D

9323 - 873 = ☐ → O

5207 - 2076 = ☐ → R

8633 - 243 = ☐ → C

10189 - 4550 = ☐ → L

9217 - 4233 = ☐ → T

8702 - 493 = ☐ → V

5354 - 3506 = ☐ → F

5941 - 3424 = ☐ → A

4786 - 2270 = ☐ → P

11138 - 4756 = ☐ → S

8756 - 4146 = ☐ → I

11947 - 3233 = ☐ → E

6387 - 4846 = ☐ → N

7104 - 242 = ☐ → H

8034 - 3089 = ☐ → U

Scratch space:

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

> You split the collected monster badges equally among the squad.

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:

16 ÷ 8 = ☐	15 ÷ 3 = ☐	27 ÷ 9 = ☐	70 ÷ 10 = ☐	9 ÷ 9 = ☐
90 ÷ 9 = ☐	24 ÷ 6 = ☐	81 ÷ 9 = ☐	108 ÷ 9 = ☐	44 ÷ 4 = ☐
80 ÷ 10 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain blasted the slime sprayer, then flapped their bat wings.
2. The villain launched the bat blaster, then flapped their bat wings.
3. The villain launched the bat blaster, then adjusted their glow cloak.
4. The villain cranked the fog machine, then vanished in a shadow shroud.
5. The villain fired the pumpkin launcher, then flapped their bat wings.
6. The villain shot the web cannon, then zipped up their skeleton suit.
7. The villain shot the web cannon, then flapped their bat wings.
8. The villain blasted the slime sprayer, then vanished in a shadow shroud.
9. The villain launched the bat blaster, then vanished in a shadow shroud.
10. The villain cranked the fog machine, then zipped up their skeleton suit.
11. The villain cranked the fog machine, then wrapped up in their mummy wrap.
12. The villain fired the pumpkin launcher, then adjusted their glow cloak.

TEACHER / PARENT

Answer Key

The Halloween Festival Mystery

Culprit: Mummy Mark

Web Cannon · Skeleton Suit · Left Handed · Purple Hair · Party Horn

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT WEAR A MUMMY WRAP"

1 × 1 = 1 (T) · 11 × 10 = 110 (A) · 7 × 7 = 49 (O) · 2 × 1 = 2 (D) · 5 × 3 = 15 (U) · 7 × 2 = 14 (M) · 3 × 9 = 27 (S) · 11 × 7 = 77 (V) · 2 × 11 = 22 (Y) · 6 × 5 = 30 (P) · 8 × 11 = 88 (E) · 5 × 11 = 55 (L) · 11 × 4 = 44 (R) · 6 × 2 = 12 (W) · 7 × 12 = 84 (I) · 12 × 4 = 48 (N) · 1 × 11 = 11 (H)

Clue 2 (Rounding): "A WITNESS SAW THE PRANKSTER USE THEIR LEFT HAND"

Round 429 to the nearest ten = 430 (A) · Round 537 to the nearest hundred = 500 (S) · Round 897 to the nearest hundred = 900 (W) · Round 1,079 to the nearest hundred = 1100 (H) · Round 1,535 to the nearest thousand = 2000 (N) · Round 2,757 to the nearest thousand = 3000 (D) · Round 19 to the nearest ten = 20 (T) · Round 5,156 to the nearest thousand = 5000 (U) · Round 9,308 to the nearest thousand = 9000 (R) · Round 1,307 to the nearest hundred = 1300 (P) · Round 192 to the nearest hundred = 200 (I) · Round 111 to the nearest ten = 110 (F) · Round 1,673 to the nearest hundred = 1700 (L) · Round 2,289 to the nearest hundred = 2300 (E) · Round 7,456 to the nearest thousand = 7000 (K)

Clue 3 (Addition): "THE VILLAIN WAS SCARED BY A LOUD PARTY HORN"

4465 + 2699 = 7164 (T) · 3071 + 2159 = 5230 (E) · 3160 + 2913 = 6073 (A) · 5398 + 3682 = 9080 (W) · 1440 + 3083 = 4523 (P) · 1647 + 3628 = 5275 (I) · 2117 + 2468 = 4585 (R) · 2195 + 2677 = 4872 (D) · 2337 + 3575 = 5912 (H) · 2542 + 2286 = 4828 (U) · 2841 + 1962 = 4803 (O) · 814 + 1229 = 2043 (L) · 2135 + 1328 = 3463 (C) · 4957 + 4405 = 9362 (Y) · 940 + 1096 = 2036 (V) · 2918 + 5105 = 8023 (S) · 1846 + 3351 = 5197 (B) · 3182 + 5672 = 8854 (N)

Clue 4 (Subtraction): "DETECTIVES FOUND PURPLE HAIR AT THE SCENE"

8385 - 481 = 7904 (D) · 9323 - 873 = 8450 (O) · 5207 - 2076 = 3131 (R) · 8633 - 243 = 8390 (C) · 10189 - 4550 = 5639 (L) · 9217 - 4233 = 4984 (T) · 8702 - 493 = 8209 (V) · 5354 - 3506 = 1848 (F) · 5941 - 3424 = 2517 (A) · 4786 - 2270 = 2516 (P) · 11138 - 4756 = 6382 (S) · 8756 - 4146 = 4610 (I) · 11947 - 3233 = 8714 (E) · 6387 - 4846 = 1541 (N) · 7104 - 242 = 6862 (H) · 8034 - 3089 = 4945 (U)

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

16 ÷ 8 = 2 · 15 ÷ 3 = 5 · 27 ÷ 9 = 3 · 70 ÷ 10 = 7 · 9 ÷ 9 = 1 · 90 ÷ 9 = 10 · 24 ÷ 6 = 4 · 81 ÷ 9 = 9 · 108 ÷ 9 = 12 · 44 ÷ 4 = 11 · 80 ÷ 10 = 8