



The Spooksville Pumpkin Prank

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

Detective: _____ Date: _____

Someone scrambled the grand prize decorations right before the spooky festival began! Work through the math clues to figure out who pulled off this Halloween trick.

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 Mischievous Phantom is _____

Possible suspects

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

NAME	COSTUME TRICK	SPOOKY TOOL	DOMINANT HAND	HEADWEAR	SCARE FACTOR
Spike Spider	Ghost Float	Glow Wand	Left Handed	Black Hat	Bright Flashlights
Willa Web	Bat Flutter	Jack Lantern	Left Handed	Black Hat	Loud Bells
Vince Vampire	Pumpkin Toss	Glow Wand	Left Handed	Black Hat	Bright Flashlights
Bruno Bat	Skeleton Dance	Candy Sack	Right Handed	Orange Wig	Garlic Sprays
Zack Zombie	Witch Flight	Candy Sack	Left Handed	Orange Wig	Garlic Sprays
Fiona Fog	Pumpkin Toss	Glow Wand	Left Handed	Orange Wig	Garlic Sprays
Carl Cat	Skeleton Dance	Jack Lantern	Right Handed	Black Hat	Garlic Sprays
Frankie Stein	Witch Flight	Glow Wand	Left Handed	Purple Hood	Garlic Sprays
Victor Vane	Skeleton Dance	Candy Sack	Left Handed	Orange Wig	Garlic Sprays
Pam Pumpkin	Ghost Float	Glow Wand	Right Handed	Black Hat	Bright Flashlights
Ray Raven	Skeleton Dance	Cobweb Cannon	Left Handed	Purple Hood	Garlic Sprays
Otto Owl	Skeleton Dance	Fog Jar	Left Handed	Orange Wig	Garlic Sprays
Penny Patch	Pumpkin Toss	Cobweb Cannon	Right Handed	Orange Wig	Bright Flashlights
Mina Mummy	Pumpkin Toss	Cobweb Cannon	Left Handed	Orange Wig	Garlic Sprays
Skyler Skull	Skeleton Dance	Glow Wand	Left Handed	Purple Hood	Bright Flashlights
Gaby Ghost	Witch Flight	Fog Jar	Right Handed	Black Hat	Garlic Sprays
Sam Skeleton	Witch Flight	Jack Lantern	Right Handed	Orange Wig	Garlic Sprays
Uma Urn	Ghost Float	Cobweb Cannon	Left Handed	Purple Hood	Loud Bells
Xander Xray	Skeleton Dance	Jack Lantern	Left Handed	Orange Wig	Garlic Sprays
Gwen Goblin	Skeleton Dance	Glow Wand	Left Handed	Orange Wig	Loud Bells
Wendy Witch	Ghost Float	Jack Lantern	Right Handed	Orange Wig	Bright Flashlights

CLUE 1
Multiplication facts (1-12)

You count the pumpkin patches in equal rows across the carnival field to decode the first message.

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

T																T
22	100	77	24	27	6	6	80	27	8	33	66	77	88	8	66	22

108	88	77	80	15	80	8	33	14	88	80	15	63	

$2 \times 11 = \square \rightarrow \boxed{\text{T}}$

$12 \times 2 = \square \rightarrow \boxed{\text{V}}$

$6 \times 11 = \square \rightarrow \boxed{\text{O}}$

$10 \times 10 = \square \rightarrow \boxed{\text{H}}$

$8 \times 11 = \square \rightarrow \boxed{\text{S}}$

$8 \times 10 = \square \rightarrow \boxed{\text{A}}$

$3 \times 9 = \square \rightarrow \boxed{\text{I}}$

$3 \times 5 = \square \rightarrow \boxed{\text{C}}$

$1 \times 8 = \square \rightarrow \boxed{\text{N}}$

$7 \times 9 = \square \rightarrow \boxed{\text{K}}$

$12 \times 9 = \square \rightarrow \boxed{\text{U}}$

$2 \times 3 = \square \rightarrow \boxed{\text{L}}$

$3 \times 11 = \square \rightarrow \boxed{\text{D}}$

$7 \times 2 = \square \rightarrow \boxed{\text{Y}}$

$11 \times 7 = \square \rightarrow \boxed{\text{E}}$

Scratch space:

CLUE 2

Rounding

The spookmeter monitor rounds the magic power reading to the nearest ten to reveal a hint.

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

W									W					W				
200	50	8000	80	500	20	20	20	700	200	8000	3000	500	40	200	400	50	8000	500

W												
200	50	8000	3000	900	500	70	8000	3000	700	80	90	

Round 235 to the nearest hundred → **W**

Round 520 to the nearest hundred → **E**

Round 8,239 to the nearest thousand → **T**

Round 697 to the nearest hundred → **A**

Round 49 to the nearest ten → **I**

Round 2,543 to the nearest thousand → **H**

Round 865 to the nearest hundred → **L**

Round 71 to the nearest ten → **F**

Round 77 to the nearest ten → **N**

Round 90 to the nearest ten → **D**

Round 437 to the nearest hundred → **R**

Round 22 to the nearest ten → **S**

Round 41 to the nearest ten → **M**

Scratch space:

CLUE 3 Addition

You tally all the decorative treats gathered from each game booth to combine the evidence.

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

T																	
730	536	452	943	706	353	353	888	706	312	594	353	452	842	594	621	813	231

674	888	621	353	706	741	791	614	621	888	880	791

$262 + 468 = \square \rightarrow \text{T}$	$356 + 486 = \square \rightarrow \text{D}$	$243 + 498 = \square \rightarrow \text{C}$
$378 + 243 = \square \rightarrow \text{R}$	$331 + 283 = \square \rightarrow \text{P}$	$121 + 191 = \square \rightarrow \text{N}$
$542 + 249 = \square \rightarrow \text{S}$	$615 + 328 = \square \rightarrow \text{V}$	$163 + 373 = \square \rightarrow \text{H}$
$524 + 356 = \square \rightarrow \text{Y}$	$289 + 163 = \square \rightarrow \text{E}$	$558 + 255 = \square \rightarrow \text{O}$
$354 + 352 = \square \rightarrow \text{I}$	$249 + 345 = \square \rightarrow \text{F}$	$86 + 145 = \square \rightarrow \text{M}$
$115 + 238 = \square \rightarrow \text{L}$	$282 + 392 = \square \rightarrow \text{G}$	$292 + 596 = \square \rightarrow \text{A}$

Scratch space:

CLUE 4

Subtraction

You subtract the ruined decorations from the total stack to uncover the hidden proof.

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

F																
615	386	378	592	491	868	592	386	660	868	592	795	272	814	801	795	

575	527	660	868	592	491	868	527	575	279	272	592	272

$835 - 220 = \square \rightarrow \boxed{\mathbf{F}}$

$554 - 63 = \square \rightarrow \boxed{\mathbf{D}}$

$691 - 116 = \square \rightarrow \boxed{\mathbf{S}}$

$522 - 136 = \square \rightarrow \boxed{\mathbf{O}}$

$1045 - 385 = \square \rightarrow \boxed{\mathbf{R}}$

$777 - 185 = \square \rightarrow \boxed{\mathbf{N}}$

$785 - 258 = \square \rightarrow \boxed{\mathbf{T}}$

$907 - 93 = \square \rightarrow \boxed{\mathbf{W}}$

$350 - 71 = \square \rightarrow \boxed{\mathbf{C}}$

$966 - 171 = \square \rightarrow \boxed{\mathbf{G}}$

$658 - 280 = \square \rightarrow \boxed{\mathbf{U}}$

$846 - 45 = \square \rightarrow \boxed{\mathbf{I}}$

$461 - 189 = \square \rightarrow \boxed{\mathbf{E}}$

$947 - 79 = \square \rightarrow \boxed{\mathbf{A}}$

Scratch space:

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

You divide the batch of potion bottles evenly among the treat bags to crack the final clue.

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:

$16 \div 8 = \boxed{}$

$63 \div 7 = \boxed{}$

$4 \div 1 = \boxed{}$

$66 \div 6 = \boxed{}$

$64 \div 8 = \boxed{}$

$72 \div 6 = \boxed{}$

$10 \div 10 = \boxed{}$

$56 \div 8 = \boxed{}$

$12 \div 2 = \boxed{}$

$9 \div 3 = \boxed{}$

$50 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain floated like a ghost, then fired a cobweb cannon.
2. The villain tossed a giant pumpkin, then waved a glow wand.
3. The villain floated like a ghost, then opened a fog jar.
4. The villain did a skeleton dance, then opened a fog jar.
5. The villain did a skeleton dance, then lit a jack lantern.
6. The villain tossed a giant pumpkin, then opened a fog jar.
7. The villain fluttered like a bat, then waved a glow wand.
8. The villain fluttered like a bat, then lit a jack lantern.
9. The villain tossed a giant pumpkin, then fired a cobweb cannon.
10. The villain tossed a giant pumpkin, then dropped a candy sack.
11. The villain flew on a broomstick, then fired a cobweb cannon.
12. The villain floated like a ghost, then dropped a candy sack.

Answer Key

The Spooksville Pumpkin Prank

Culprit: Xander Xray

Skeleton Dance · Jack Lantern · Left Handed · Orange Wig · Garlic Sprays

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE A CANDY SACK"

$2 \times 11 = 22$ (T) · $12 \times 2 = 24$ (V) · $6 \times 11 = 66$ (O) · $10 \times 10 = 100$ (H) · $8 \times 11 = 88$ (S) · $8 \times 10 = 80$ (A) · $3 \times 9 = 27$ (I) · $3 \times 5 = 15$ (C) · $1 \times 8 = 8$ (N) · $7 \times 9 = 63$ (K) · $12 \times 9 = 108$ (U) · $2 \times 3 = 6$ (L) · $3 \times 11 = 33$ (D) · $7 \times 2 = 14$ (Y) · $11 \times 7 = 77$ (E)

Clue 2 (Rounding): "WITNESS SAW THEM WRITE WITH LEFT HAND"

Round 235 to the nearest hundred = 200 (W) · Round 520 to the nearest hundred = 500 (E) · Round 8,239 to the nearest thousand = 8000 (T) · Round 697 to the nearest hundred = 700 (A) · Round 49 to the nearest ten = 50 (I) · Round 2,543 to the nearest thousand = 3000 (H) · Round 865 to the nearest hundred = 900 (L) · Round 71 to the nearest ten = 70 (F) · Round 77 to the nearest ten = 80 (N) · Round 90 to the nearest ten = 90 (D) · Round 437 to the nearest hundred = 400 (R) · Round 22 to the nearest ten = 20 (S) · Round 41 to the nearest ten = 40 (M)

Clue 3 (Addition): "THE VILLAIN FLED FROM GARLIC SPRAYS"

$262 + 468 = 730$ (T) · $356 + 486 = 842$ (D) · $243 + 498 = 741$ (C) · $378 + 243 = 621$ (R) · $331 + 283 = 614$ (P) · $121 + 191 = 312$ (N) · $542 + 249 = 791$ (S) · $615 + 328 = 943$ (V) · $163 + 373 = 536$ (H) · $524 + 356 = 880$ (Y) · $289 + 163 = 452$ (E) · $558 + 255 = 813$ (O) · $354 + 352 = 706$ (I) · $249 + 345 = 594$ (F) · $86 + 145 = 231$ (M) · $115 + 238 = 353$ (L) · $282 + 392 = 674$ (G) · $292 + 596 = 888$ (A)

Clue 4 (Subtraction): "FOUND AN ORANGE WIG STRAND AT SCENE"

$835 - 220 = 615$ (F) · $554 - 63 = 491$ (D) · $691 - 116 = 575$ (S) · $522 - 136 = 386$ (O) · $1045 - 385 = 660$ (R) · $777 - 185 = 592$ (N) · $785 - 258 = 527$ (T) · $907 - 93 = 814$ (W) · $350 - 71 = 279$ (C) · $966 - 171 = 795$ (G) · $658 - 280 = 378$ (U) · $846 - 45 = 801$ (I) · $461 - 189 = 272$ (E) · $947 - 79 = 868$ (A)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Xander Xray

$16 \div 8 = 2$ · $63 \div 7 = 9$ · $4 \div 1 = 4$ · $66 \div 6 = 11$ · $64 \div 8 = 8$ · $72 \div 6 = 12$ · $10 \div 10 = 1$ · $56 \div 8 = 7$ · $12 \div 2 = 6$ · $9 \div 3 = 3$ · $50 \div 5 = 10$