



The Mystery of the Missing Great Lantern

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

Detective: _____ **Date:** _____

Someone snuck into the Autumn Moon Pumpkin Patch and stole the golden Great Lantern right before the midnight festival! Detective, examine the clues left behind by the witchy suspect to track down the thief.

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 wicked trickster is _____

Possible suspects

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

NAME	MAIN MAGIC	EXTRA SPELL	WAND HAND	HAIR COLOR	BANISH ITEM
Marnie Moss	Vine Tangle	Cackling Echo	Left-handed	Black Hair	Moon Water
Corvin Crow	Glow Shock	Shadow Cloak	Left-handed	Silver Hair	Silver Bell
Soren Harvest	Leaf Swirl	Spell Shield	Right-handed	Orange Hair	Salt Powder
Orla Oak	Broom Zoom	Cackling Echo	Left-handed	Silver Hair	Silver Bell
Cedric Crisp	Pumpkin Blast	Spider Swarm	Right-handed	Black Hair	Silver Bell
Tabitha Broom	Broom Zoom	Lantern Flare	Left-handed	Silver Hair	Silver Bell
Tamsin Twig	Leaf Swirl	Lantern Flare	Left-handed	Silver Hair	Moon Water
Gwen Night	Vine Tangle	Lantern Flare	Left-handed	Silver Hair	Silver Bell
Jasper Autumn	Pumpkin Blast	Cackling Echo	Left-handed	Silver Hair	Salt Powder
Zephyr Fall	Vine Tangle	Lantern Flare	Right-handed	Silver Hair	Silver Bell
Jack Lantern	Glow Shock	Spell Shield	Left-handed	Silver Hair	Moon Water
Fiona Fox	Broom Zoom	Shadow Cloak	Left-handed	Orange Hair	Silver Bell
Bramble Finch	Vine Tangle	Spider Swarm	Right-handed	Orange Hair	Salt Powder
Gulliver Ghost	Leaf Swirl	Lantern Flare	Right-handed	Silver Hair	Silver Bell
Esme Ember	Leaf Swirl	Cackling Echo	Left-handed	Silver Hair	Silver Bell
Willow Wood	Glow Shock	Cackling Echo	Right-handed	Orange Hair	Moon Water
Piper Pumpkin	Broom Zoom	Shadow Cloak	Right-handed	Orange Hair	Moon Water
Rowan Leaf	Vine Tangle	Lantern Flare	Left-handed	Orange Hair	Silver Bell
Thistle Thorn	Broom Zoom	Cackling Echo	Right-handed	Black Hair	Silver Bell
Mona Moon	Vine Tangle	Spell Shield	Left-handed	Orange Hair	Salt Powder
Cora Cobweb	Pumpkin Blast	Shadow Cloak	Right-handed	Orange Hair	Moon Water

CLUE 1

Multiplication facts (1-12)

We found rows of glowing lanterns in the dark barn. Multiply the rows to reveal the first hidden clue!

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

T																T
84	3	8	9	45	72	72	120	45	20	110	10	8	1	20	10	84
44	1	8	1	3	120	110	10	24	27	72	10	120	144			

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

$4 \times 6 = \square \rightarrow \boxed{\text{W}}$

$1 \times 10 = \square \rightarrow \boxed{\text{O}}$

$3 \times 1 = \square \rightarrow \boxed{\text{H}}$

$11 \times 4 = \square \rightarrow \boxed{\text{U}}$

$8 \times 9 = \square \rightarrow \boxed{\text{L}}$

$2 \times 10 = \square \rightarrow \boxed{\text{N}}$

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

$11 \times 10 = \square \rightarrow \boxed{\text{D}}$

$4 \times 2 = \square \rightarrow \boxed{\text{E}}$

$3 \times 3 = \square \rightarrow \boxed{\text{V}}$

$12 \times 12 = \square \rightarrow \boxed{\text{K}}$

$12 \times 10 = \square \rightarrow \boxed{\text{A}}$

$1 \times 1 = \square \rightarrow \boxed{\text{S}}$

$9 \times 5 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 2

Rounding

The spell meter on the altar shows an exact number. Round it to the nearest ten to unlock the message.

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

T									T				T	
70	370	1300	500	30	500	9000	1300	1700	70	430	1300	1100	70	2000
			T										T	
430	1300	1100	70	370	2000	50	2900	1300	2900	9000	130	110	50	70

Round 72 to the nearest ten → **T**

Round 110 to the nearest ten → **I**

Round 1,127 to the nearest hundred → **F**

Round 1,687 to the nearest hundred → **C**

Round 9,486 to the nearest thousand → **P**

Round 1,790 to the nearest thousand → **A**

Round 1,256 to the nearest hundred → **E**

Round 427 to the nearest ten → **L**

Round 132 to the nearest ten → **R**

Round 547 to the nearest hundred → **S**

Round 2,898 to the nearest hundred → **D**

Round 51 to the nearest ten → **N**

Round 368 to the nearest ten → **H**

Round 31 to the nearest ten → **U**

Scratch space:

CLUE 3 Addition

Counting up all the scattered magic leaves gives us a total count and unveils the next clue!

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

A																
2452	9249	8751	2041	9796	9115	8138	5415	9115	2041	2041	9249	4007	2452	8138	9115	9490

						A			
8118	3636	9115	9796	8751	2041	2041	2452	8751	7354

$1567 + 885 = \square \rightarrow \boxed{\text{A}}$

$3692 + 5798 = \square \rightarrow \boxed{\text{D}}$

$2942 + 5176 = \square \rightarrow \boxed{\text{T}}$

$3394 + 2021 = \square \rightarrow \boxed{\text{B}}$

$4285 + 3069 = \square \rightarrow \boxed{\text{N}}$

$1779 + 1857 = \square \rightarrow \boxed{\text{H}}$

$4084 + 5031 = \square \rightarrow \boxed{\text{E}}$

$683 + 1358 = \square \rightarrow \boxed{\text{L}}$

$1449 + 2558 = \square \rightarrow \boxed{\text{C}}$

$6183 + 3613 = \square \rightarrow \boxed{\text{V}}$

$4893 + 4356 = \square \rightarrow \boxed{\text{S}}$

$4575 + 4176 = \square \rightarrow \boxed{\text{I}}$

$3508 + 4630 = \square \rightarrow \boxed{\text{R}}$

Scratch space:

CLUE 4

Subtraction

Subtract the crushed pumpkins from the full harvest to figure out what was taken.

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

S												S					
7570	4868	7791	1565	3612	5054	2961	4291	4868	5054	8406	4291	7570	6286	4191	8780	7571	3625

7571	3612	4291	5054	7039	2961	3612	5921	8780	7241	5921	7312	4868	7571				

$10646 - 3076 = \square \rightarrow \boxed{\text{S}}$

$7448 - 1527 = \square \rightarrow \boxed{\text{P}}$

$6603 - 1549 = \square \rightarrow \boxed{\text{R}}$

$10208 - 2967 = \square \rightarrow \boxed{\text{M}}$

$3247 - 286 = \square \rightarrow \boxed{\text{H}}$

$8165 - 4540 = \square \rightarrow \boxed{\text{D}}$

$12314 - 3908 = \square \rightarrow \boxed{\text{W}}$

$4794 - 1182 = \square \rightarrow \boxed{\text{E}}$

$11604 - 4565 = \square \rightarrow \boxed{\text{T}}$

$5464 - 3899 = \square \rightarrow \boxed{\text{V}}$

$9271 - 1959 = \square \rightarrow \boxed{\text{K}}$

$8204 - 633 = \square \rightarrow \boxed{\text{N}}$

$6086 - 1895 = \square \rightarrow \boxed{\text{O}}$

$12744 - 3964 = \square \rightarrow \boxed{\text{U}}$

$9756 - 4888 = \square \rightarrow \boxed{\text{I}}$

$7298 - 3007 = \square \rightarrow \boxed{\text{A}}$

$7069 - 783 = \square \rightarrow \boxed{\text{F}}$

$8414 - 623 = \square \rightarrow \boxed{\text{L}}$

Scratch space:

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

Sharing the potion bottles equally among the brew cauldrons opens the final secret door!

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:

$56 \div 7 = \boxed{}$

$99 \div 11 = \boxed{}$

$11 \div 11 = \boxed{}$

$70 \div 10 = \boxed{}$

$50 \div 5 = \boxed{}$

$55 \div 5 = \boxed{}$

$16 \div 4 = \boxed{}$

$30 \div 10 = \boxed{}$

$60 \div 12 = \boxed{}$

$12 \div 2 = \boxed{}$

$24 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain zoomed past on a glowing broomstick, then echoed a spooky cackle through the woods.
2. The villain lit up the lanterns with orange fire, then cast a spell shield to block the guard.
3. The villain lit up the lanterns with orange fire, then wrapped up in a shadowy cloak.
4. The villain tangled the patch with giant vines, then cast a spell shield to block the guard.
5. The villain blew a gale of crunching autumn leaves, then cast a spell shield to block the guard.
6. The villain tangled the patch with giant vines, then echoed a spooky cackle through the woods.
7. The villain blasted a carved pumpkin with leaf sparks, then summoned a swarm of glowing spiders.
8. The villain zoomed past on a glowing broomstick, then flashed a bright lantern flare.
9. The villain blew a gale of crunching autumn leaves, then echoed a spooky cackle through the woods.
10. The villain blew a gale of crunching autumn leaves, then flashed a bright lantern flare.
11. The villain tangled the patch with giant vines, then wrapped up in a shadowy cloak.
12. The villain tangled the patch with giant vines, then flashed a bright lantern flare.

Answer Key

The Mystery of the Missing Great Lantern

Culprit: Gwen Night

Vine Tangle · Lantern Flare · Left-handed · Silver Hair · Silver Bell

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE SHADOW CLOAK"

$7 \times 12 = 84$ (T) · $4 \times 6 = 24$ (W) · $1 \times 10 = 10$ (O) · $3 \times 1 = 3$ (H) · $11 \times 4 = 44$ (U) · $8 \times 9 = 72$ (L) · $2 \times 10 = 20$ (N) · $3 \times 9 = 27$ (C) · $11 \times 10 = 110$ (D) · $4 \times 2 = 8$ (E) · $3 \times 3 = 9$ (V) · $12 \times 12 = 144$ (K) · $12 \times 10 = 120$ (A) · $1 \times 1 = 1$ (S) · $9 \times 5 = 45$ (I)

Clue 2 (Rounding): "THE SUSPECT LEFT A LEFTHANDED PRINT"

Round 72 to the nearest ten = 70 (T) · Round 110 to the nearest ten = 110 (I) · Round 1,127 to the nearest hundred = 1100 (F) · Round 1,687 to the nearest hundred = 1700 (C) · Round 9,486 to the nearest thousand = 9000 (P) · Round 1,790 to the nearest thousand = 2000 (A) · Round 1,256 to the nearest hundred = 1300 (E) · Round 427 to the nearest ten = 430 (L) · Round 132 to the nearest ten = 130 (R) · Round 547 to the nearest hundred = 500 (S) · Round 2,898 to the nearest hundred = 2900 (D) · Round 51 to the nearest ten = 50 (N) · Round 368 to the nearest ten = 370 (H) · Round 31 to the nearest ten = 30 (U)

Clue 3 (Addition): "A SILVER BELL SCARED THE VILLAIN"

$1567 + 885 = 2452$ (A) · $3692 + 5798 = 9490$ (D) · $2942 + 5176 = 8118$ (T) · $3394 + 2021 = 5415$ (B) · $4285 + 3069 = 7354$ (N) · $1779 + 1857 = 3636$ (H) · $4084 + 5031 = 9115$ (E) · $683 + 1358 = 2041$ (L) · $1449 + 2558 = 4007$ (C) · $6183 + 3613 = 9796$ (V) · $4893 + 4356 = 9249$ (S) · $4575 + 4176 = 8751$ (I) · $3508 + 4630 = 8138$ (R)

Clue 4 (Subtraction): "SILVER HAIR WAS FOUND NEAR THE PUMPKIN"

$10646 - 3076 = 7570$ (S) · $7448 - 1527 = 5921$ (P) · $6603 - 1549 = 5054$ (R) · $10208 - 2967 = 7241$ (M) · $3247 - 286 = 2961$ (H) · $8165 - 4540 = 3625$ (D) · $12314 - 3908 = 8406$ (W) · $4794 - 1182 = 3612$ (E) · $11604 - 4565 = 7039$ (T) · $5464 - 3899 = 1565$ (V) · $9271 - 1959 = 7312$ (K) · $8204 - 633 = 7571$ (N) · $6086 - 1895 = 4191$ (O) · $12744 - 3964 = 8780$ (U) · $9756 - 4888 = 4868$ (I) · $7298 - 3007 = 4291$ (A) · $7069 - 783 = 6286$ (F) · $8414 - 623 = 7791$ (L)

Clue 5 (Division facts (1-12)): surviving statement is box 12 → Gwen Night

$56 \div 7 = 8$ · $99 \div 11 = 9$ · $11 \div 11 = 1$ · $70 \div 10 = 7$ · $50 \div 5 = 10$ · $55 \div 5 = 11$ · $16 \div 4 = 4$ · $30 \div 10 = 3$ · $60 \div 12 = 5$ · $12 \div 2 = 6$ · $24 \div 12 = 2$