



The Great Pumpkin Cake Mystery

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

Detective: _____ Date: _____

Oh no! Creepwood Academy is in an uproar. Someone snuck into the cafeteria and ate Chef Gloop's giant Pumpkin Cake! It was supposed to be the dessert for the monster party tonight. Inspector Ghoul is on the case to find out which young monster 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 Cake Snatcher is _____

Possible suspects

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

NAME	SCARY SKILL	SPECIAL ABILITY	ACTIVE CLAW	FUR COLOR	FEAR
Zombie	Super jumping	Wall climbing	Right clawed	Green fur	Cold water
Ghoul	Fire breathing	Steel claws	Right clawed	Purple fur	Cold water
Gorgon	Sonic howling	Wall climbing	Right clawed	Orange fur	Bright light
Chupacabra	Super jumping	Horn glowing	Right clawed	Green fur	Cold water
Goblin	Slime trailing	Steel claws	Left clawed	Green fur	Loud bells
Yeti	Fire breathing	Night vision	Right clawed	Purple fur	Cold water
Pixie	Super jumping	Steel claws	Right clawed	Green fur	Loud bells
Wolfie	Fire breathing	Horn glowing	Right clawed	Purple fur	Cold water
Kraken	Sonic howling	Spike shooting	Right clawed	Purple fur	Cold water
Dracula	Super jumping	Wall climbing	Left clawed	Purple fur	Cold water
Cyclops	Slime trailing	Spike shooting	Right clawed	Purple fur	Loud bells
Hydra	Shadow blending	Night vision	Left clawed	Orange fur	Loud bells
Minotaur	Sonic howling	Spike shooting	Left clawed	Orange fur	Cold water
Griffin	Super jumping	Night vision	Right clawed	Purple fur	Cold water
Bigfoot	Super jumping	Wall climbing	Left clawed	Purple fur	Bright light
Banshee	Fire breathing	Wall climbing	Left clawed	Green fur	Cold water
Frankie	Fire breathing	Spike shooting	Left clawed	Green fur	Bright light
Nessie	Shadow blending	Spike shooting	Left clawed	Orange fur	Bright light
Orc	Shadow blending	Night vision	Left clawed	Purple fur	Cold water
Gremlin	Sonic howling	Steel claws	Left clawed	Green fur	Bright light
Basilisk	Sonic howling	Steel claws	Right clawed	Purple fur	Loud bells

CLUE 1 Rounding

The school radar tracks heavy footprints. It rounds the number of steps to the nearest ten. Round the radar reading to find the first clue.

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

T						T												T
230	90	1100	20	200	900	230	290	90	1100	3000	4300	170	1100	20	200	170	230	
				T														
20	90	170	170	230	20	500	70	370	1100	20								

Round 227 to the nearest ten → **T**

Round 366 to the nearest ten → **K**

Round 67 to the nearest ten → **I**

Round 89 to the nearest ten → **H**

Round 287 to the nearest ten → **C**

Round 458 to the nearest hundred → **P**

Round 24 to the nearest ten → **S**

Round 4,286 to the nearest hundred → **D**

Round 197 to the nearest hundred → **N**

Round 931 to the nearest hundred → **A**

Round 168 to the nearest ten → **O**

Round 1,055 to the nearest hundred → **E**

Round 2,821 to the nearest thousand → **R**

Scratch space:

CLUE 2 Addition

We found muddy claw marks in the hallway. Add up the marks on each floor tile to reveal the next piece of evidence.

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

R											R							R	
2773	8307	2702	9414	4789	7310	4673	3048	2141	5449	3048	2773	5283	2294	2141	5499	2773	5499		
																		R	
2295	5896	7217	9504	2802	3048	4789	4789	9414	5499	2802	5896	5896	2773						

$1242 + 1531 = \square \rightarrow$ R	$1366 + 929 = \square \rightarrow$ F	$2704 + 2579 = \square \rightarrow$ K
$2084 + 964 = \square \rightarrow$ A	$1009 + 1693 = \square \rightarrow$ G	$3174 + 4043 = \square \rightarrow$ U
$1007 + 1795 = \square \rightarrow$ D	$2754 + 5553 = \square \rightarrow$ I	$693 + 1448 = \square \rightarrow$ W
$4009 + 5405 = \square \rightarrow$ H	$2197 + 3699 = \square \rightarrow$ O	$3046 + 2453 = \square \rightarrow$ E
$2544 + 2245 = \square \rightarrow$ T	$3042 + 2407 = \square \rightarrow$ M	$1399 + 895 = \square \rightarrow$ S
$4927 + 4577 = \square \rightarrow$ N	$2771 + 4539 = \square \rightarrow$ C	$2589 + 2084 = \square \rightarrow$ L

Scratch space:

CLUE 3 Subtraction

The kitchen freezer got much colder after the thief entered. Subtract the new temperature from the old one to unlock this clue.

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

T																		
4497	7407	8021	1102	8021	3461	8324	4497	2535	3461	7762	3461	3232	3461	8686	4720	2535	3155	5812

6387	3155	7371	1641	3232	3461	4497	8021	2535

7952 - 3455 = → T	9336 - 1929 = → H	10765 - 2744 = → E
3509 - 48 = → A	6161 - 4520 = → D	9010 - 3198 = → M
3055 - 520 = → R	7944 - 3224 = → F	10465 - 4078 = → C
11433 - 2747 = → Y	3780 - 625 = → O	7027 - 3795 = → W
4401 - 3299 = → B	12188 - 4817 = → L	12377 - 4615 = → N
13253 - 4929 = → S		

Scratch space:

CLUE 4
Multiplication facts (1-12)

The monster ran through a field of glowing mushrooms. Solve this multiplication problem to count the squished rows and find a clue.

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

W															
110	22	64	70	3	90	55	1	3	33	1	49	22	64	3	33
100	27	22	60	63	100	77	27	22	90						

$11 \times 10 = \square \rightarrow \text{W}$

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

$3 \times 11 = \square \rightarrow \text{R}$

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

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

$7 \times 7 = \square \rightarrow \text{L}$

$7 \times 10 = \square \rightarrow \text{O}$

$9 \times 3 = \square \rightarrow \text{H}$

$9 \times 10 = \square \rightarrow \text{N}$

$6 \times 10 = \square \rightarrow \text{K}$

$1 \times 1 = \square \rightarrow \text{P}$

$9 \times 7 = \square \rightarrow \text{I}$

$1 \times 3 = \square \rightarrow \text{U}$

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

$7 \times 11 = \square \rightarrow \text{C}$

Scratch space:

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

The detective squad needs to share their magnifying glasses equally. Divide the gear to get 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:

$45 \div 5 = \boxed{}$

$90 \div 9 = \boxed{}$

$48 \div 8 = \boxed{}$

$1 \div 1 = \boxed{}$

$8 \div 4 = \boxed{}$

$32 \div 4 = \boxed{}$

$32 \div 8 = \boxed{}$

$9 \div 3 = \boxed{}$

$35 \div 7 = \boxed{}$

$132 \div 12 = \boxed{}$

$108 \div 9 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain howled a loud sonic boom, then scratched the floor with steel claws.
2. The villain breathed fire on the oven, then climbed up the brick wall.
3. The villain howled a loud sonic boom, then shot spikes into the target.
4. The villain left a sticky slime trail, then climbed up the brick wall.
5. The villain blended into the shadows, then used night vision to see.
6. The villain breathed fire on the oven, then used night vision to see.
7. The villain breathed fire on the oven, then scratched the floor with steel claws.
8. The villain blended into the shadows, then lit up the room with a glowing horn.
9. The villain breathed fire on the oven, then lit up the room with a glowing horn.
10. The villain jumped over the high wall, then used night vision to see.
11. The villain howled a loud sonic boom, then used night vision to see.
12. The villain breathed fire on the oven, then shot spikes into the target.

Answer Key

The Great Pumpkin Cake Mystery

Culprit: Ghoul

Fire breathing · Steel claws · Right clawed · Purple fur · Cold water

Trail: Start 21 → Clue 1 16 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SNATCHER DOES NOT SHOOT SPIKES"

Round 227 to the nearest ten = 230 (T) · Round 366 to the nearest ten = 370 (K) · Round 67 to the nearest ten = 70 (I) · Round 89 to the nearest ten = 90 (H) · Round 287 to the nearest ten = 290 (C) · Round 458 to the nearest hundred = 500 (P) · Round 24 to the nearest ten = 20 (S) · Round 4,286 to the nearest hundred = 4300 (D) · Round 197 to the nearest hundred = 200 (N) · Round 931 to the nearest hundred = 900 (A) · Round 168 to the nearest ten = 170 (O) · Round 1,055 to the nearest hundred = 1100 (E) · Round 2,821 to the nearest thousand = 3000 (R)

Clue 2 (Addition): "RIGHT CLAW MARKS WERE FOUND AT THE DOOR"

$1242 + 1531 = 2773$ (R) · $1366 + 929 = 2295$ (F) · $2704 + 2579 = 5283$ (K) · $2084 + 964 = 3048$ (A) · $1009 + 1693 = 2702$ (G) · $3174 + 4043 = 7217$ (U) · $1007 + 1795 = 2802$ (D) · $2754 + 5553 = 8307$ (I) · $693 + 1448 = 2141$ (W) · $4009 + 5405 = 9414$ (H) · $2197 + 3699 = 5896$ (O) · $3046 + 2453 = 5499$ (E) · $2544 + 2245 = 4789$ (T) · $3042 + 2407 = 5449$ (M) · $1399 + 895 = 2294$ (S) · $4927 + 4577 = 9504$ (N) · $2771 + 4539 = 7310$ (C) · $2589 + 2084 = 4673$ (L)

Clue 3 (Subtraction): "THE BEAST RAN AWAY FROM COLD WATER"

$7952 - 3455 = 4497$ (T) · $9336 - 1929 = 7407$ (H) · $10765 - 2744 = 8021$ (E) · $3509 - 48 = 3461$ (A) · $6161 - 4520 = 1641$ (D) · $9010 - 3198 = 5812$ (M) · $3055 - 520 = 2535$ (R) · $7944 - 3224 = 4720$ (F) · $10465 - 4078 = 6387$ (C) · $11433 - 2747 = 8686$ (Y) · $3780 - 625 = 3155$ (O) · $7027 - 3795 = 3232$ (W) · $4401 - 3299 = 1102$ (B) · $12188 - 4817 = 7371$ (L) · $12377 - 4615 = 7762$ (N) · $13253 - 4929 = 8324$ (S)

Clue 4 (Multiplication facts (1-12)): "WE FOUND PURPLE FUR IN THE KITCHEN"

$11 \times 10 = 110$ (W) · $10 \times 10 = 100$ (T) · $3 \times 11 = 33$ (R) · $8 \times 8 = 64$ (F) · $11 \times 5 = 55$ (D) · $7 \times 7 = 49$ (L) · $7 \times 10 = 70$ (O) · $9 \times 3 = 27$ (H) · $9 \times 10 = 90$ (N) · $6 \times 10 = 60$ (K) · $1 \times 1 = 1$ (P) · $9 \times 7 = 63$ (I) · $1 \times 3 = 3$ (U) · $2 \times 11 = 22$ (E) · $7 \times 11 = 77$ (C)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Ghoul

$45 \div 5 = 9$ · $90 \div 9 = 10$ · $48 \div 8 = 6$ · $1 \div 1 = 1$ · $8 \div 4 = 2$ · $32 \div 4 = 8$ · $32 \div 8 = 4$ · $9 \div 3 = 3$ · $35 \div 7 = 5$ · $132 \div 12 = 11$ · $108 \div 9 = 12$