



The Zombie Movie Set Mystery

Grade 4 math · Place value, Multiplication, Rounding, Bar models, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

While filming Zombie High, someone swiped the master film reel and scrambled the prop room! Solve the math clues to track down the mischievous actor.

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 movie prankster is _____

Possible suspects

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

NAME	ZOMBIE COSTUME	SPECIAL EFFECT	ACTOR HABIT	WIG COLOR	MOVIE PROP
Sam Rivera	Neon Ghoul	Slime Cannon	Left Handed	Silver Hair	Garlic Bread
Toby Marsh	Disco Undead	Fake Cobwebs	Left Handed	Silver Hair	Mega Megaphone
Owen Frost	Toxic Ghoul	Strobe Light	Right Handed	Silver Hair	Mega Megaphone
Ella Drake	Toxic Ghoul	Slime Cannon	Left Handed	Purple Hair	Mega Megaphone
Tia Ortiz	Cyber Walker	Fake Cobwebs	Left Handed	Purple Hair	Mega Megaphone
Hugo Knight	Disco Undead	Fog Machine	Left Handed	Silver Hair	Glitter Spray
Milo West	Cyber Walker	Slime Cannon	Right Handed	Green Hair	Garlic Bread
Lia Shaw	Disco Undead	Fog Machine	Right Handed	Silver Hair	Mega Megaphone
Zoe Bell	Toxic Ghoul	Slime Cannon	Left Handed	Purple Hair	Garlic Bread
Liam Vance	Neon Ghoul	Slime Cannon	Right Handed	Silver Hair	Mega Megaphone
Chloe Park	Pirate Zombie	Strobe Light	Left Handed	Green Hair	Garlic Bread
Ivy Chen	Cyber Walker	Fake Cobwebs	Right Handed	Silver Hair	Mega Megaphone
Nora Reed	Cyber Walker	Fake Cobwebs	Left Handed	Silver Hair	Mega Megaphone
Gabe Fox	Toxic Ghoul	Strobe Light	Right Handed	Silver Hair	Glitter Spray
Leo Cruz	Cyber Walker	Sound Horn	Left Handed	Purple Hair	Mega Megaphone
Ava Hayes	Pirate Zombie	Sound Horn	Right Handed	Silver Hair	Mega Megaphone
Finn Brody	Cyber Walker	Fake Cobwebs	Left Handed	Purple Hair	Garlic Bread
Ruby Cole	Pirate Zombie	Strobe Light	Right Handed	Silver Hair	Glitter Spray
Benny Watts	Disco Undead	Sound Horn	Left Handed	Green Hair	Mega Megaphone
Maya Lin	Neon Ghoul	Fake Cobwebs	Right Handed	Purple Hair	Mega Megaphone
Sora Kim	Cyber Walker	Slime Cannon	Left Handed	Silver Hair	Glitter Spray

CLUE 1

The director looked at the digital counter on the film vault to read the secret passcode.

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

A number line from 0 to 10,000. The line is marked with the following numbers in boxes: 50, 10, 90, 40, 3000, 60, 60, 900, 3000, 8000, 600, 300, 90, 20, 8000, 300, 50. The number 50 is highlighted in orange. Below the line, there are additional numbers in boxes: 500, 20, 90, 900, 1000, 300, 80, 9000, 900, 400, 10, 3000, 8000, 90.

What is the value of the 5 in 1,351? → **T**

What is the value of the 1 in 31,375? → **F**

What is the value of the 4 in 649? → **V**

What is the value of the 5 in 1,579? → **U**

What is the value of the 4 in 1,408? → **C**

What is the value of the 6 in 265? → **L**

What is the value of the 3 in 2,392? → **0**

What is the value of the 6 in 9,600? → **D**

What is the value of the 1 in 617? → **H**

What is the value of the 9 in 1,496? → **E**

What is the value of the 9 in 89,151? → **M**

What is the value of the 8 in 48,479? → **N**

What is the value of the 2 in 921? → **S**

What is the value of the 3 in 93,149? →

What is the value of the 8 in 1,989? → **G**

What is the value of the 9 in 4,971? → **A**

Scratch space:

Multiplication facts (1-12)

The prop manager counted rows of rubber brains stored in equal boxes across the shelves.

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

A 2x10 grid of boxes. The top row contains the following values from left to right: 49 (orange), 70, 100, 56, 54, 56, 80, 100, 40, 49 (orange), 70, 100, 28, 99, 49 (orange), 70, 100. The bottom row contains the following values from left to right: 20, 100, 100, 28, 11, 24, 49 (orange), 70, 20, 24, 48, 70, 49 (orange), 70, 16, 35, 99.

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

$2 \times 10 = \boxed{} \rightarrow \boxed{\text{R}}$

$11 \times 9 = \square \rightarrow \text{D}$

$$10 \times 7 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$9 \times 6 = \boxed{} \rightarrow \boxed{\text{U}}$$

$4 \times 12 = \boxed{} \rightarrow \boxed{\text{G}}$

$$11 \times 1 = \boxed{} \rightarrow \boxed{W}$$

$$2 \times 12 = \boxed{} \rightarrow \boxed{}$$

$$8 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$10 \times 10 = \boxed{} \rightarrow \boxed{\text{E}}$

$7 \times 4 = \boxed{} \rightarrow \boxed{\text{L}}$

$8 \times 10 = \boxed{} \rightarrow \boxed{\text{P}}$

$4 \times 4 =$ $\rightarrow$ **A**

$7 \times 5 = \boxed{} \rightarrow \boxed{\text{N}}$

$8 \times 5 = \boxed{} \rightarrow \boxed{\text{C}}$

Scratch space:

CLUE 3

Rounding

The movie radar monitor rounded the distance to the missing film reel to the nearest hundred.

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

A								A				A					
1300	370	700	500	90	110	3000	300	1300	110	3000	300	1300	2000	1100	700	230	3000
													A				
2900	5000	700	2000	2000	3000	90	5000	1100	3000	30	7000	370	370	1300	7000	230	

Round 1,267 to the nearest hundred → **A**

Round 111 to the nearest ten → **M**

Round 4,682 to the nearest thousand → **T**

Round 91 to the nearest ten → **D**

Round 1,051 to the nearest hundred → **H**

Round 227 to the nearest ten → **N**

Round 367 to the nearest ten → **L**

Round 515 to the nearest hundred → **U**

Round 346 to the nearest hundred → **G**

Round 6,588 to the nearest thousand → **I**

Round 28 to the nearest ten → **V**

Round 735 to the nearest hundred → **O**

Round 2,895 to the nearest hundred → **S**

Round 1,825 to the nearest thousand → **P**

Round 2,602 to the nearest thousand → **E**

Scratch space:

CLUE 4

Bar model word problems

The stunt coordinator compared total megabytes of footage on two hard drives using tape blocks.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

A strand of S A hair turned up at the scene.

66 123 96 103 15 48 130 123 48

The prop master shares 198 rubber brain equally among 3 teams. How many rubber brain does each team get?

draw a bar model

Answer: → S

There were 30 foam arm in all. 15 foam arm were used. How many foam arm are left?

draw a bar model

Answer: → E

The prop master used $\frac{1}{3}$ of the rubber brain on the first day. The other 82 rubber brain were used the next day. How many rubber brain were there in all?

draw a bar model

Answer: → I

The prop master used $\frac{4}{6}$ of the foam arm on the first day. The other 16 foam arm were used the next day. How many foam arm were there in all?

draw a bar model

Answer: → R

The prop master used $\frac{1}{2}$ of the fake skeleton on the first day. The other 65 fake skeleton were used the next day. How many fake skeleton were there in all?

draw a bar model

Answer: → H

The prop master has 192 fake skeleton, packed 2 to a bag. How many bags can be filled?

draw a bar model

Answer: → L

The red team has 125 fake skeleton and the blue team has 22 fake skeleton. How many more fake skeleton does the red team have?

draw a bar model

Answer: → V

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

The sound crew divided the foam zombie props evenly among the stunt wagons.

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:

$36 \div 4 = \boxed{}$

$8 \div 4 = \boxed{}$

$16 \div 4 = \boxed{}$

$21 \div 7 = \boxed{}$

$72 \div 9 = \boxed{}$

$120 \div 12 = \boxed{}$

$11 \div 11 = \boxed{}$

$108 \div 9 = \boxed{}$

$88 \div 8 = \boxed{}$

$12 \div 2 = \boxed{}$

$7 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain glowing bright under the studio lights, then filled the room with thick fog.
2. The villain shuffled past the prop room, then flashed bright strobe lights.
3. The villain danced near the camera rig, then filled the room with thick fog.
4. The villain marched through the sound stage, then covered the exit in fake cobwebs.
5. The villain limped across the movie set, then honked a loud sound horn.
6. The villain limped across the movie set, then filled the room with thick fog.
7. The villain shuffled past the prop room, then filled the room with thick fog.
8. The villain limped across the movie set, then blasted green slime everywhere.
9. The villain glowing bright under the studio lights, then blasted green slime everywhere.
10. The villain limped across the movie set, then flashed bright strobe lights.
11. The villain marched through the sound stage, then honked a loud sound horn.
12. The villain glowing bright under the studio lights, then covered the exit in fake cobwebs.

Answer Key

The Zombie Movie Set Mystery

Culprit: Ava Hayes

Pirate Zombie · Sound Horn · Right Handed · Silver Hair · Mega Megaphone

Trail: Start 21 → Clue 1 19 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE A FOG MACHINE"

What is the value of the 5 in 1,351? = 50 (T) · What is the value of the 1 in 31,375? = 1000 (F) · What is the value of the 4 in 649? = 40 (V) · What is the value of the 5 in 1,579? = 500 (U) · What is the value of the 4 in 1,408? = 400 (C) · What is the value of the 6 in 265? = 60 (L) · What is the value of the 3 in 2,392? = 300 (O) · What is the value of the 6 in 9,600? = 600 (D) · What is the value of the 1 in 617? = 10 (H) · What is the value of the 9 in 1,496? = 90 (E) · What is the value of the 9 in 89,151? = 9000 (M) · What is the value of the 8 in 48,479? = 8000 (N) · What is the value of the 2 in 921? = 20 (S) · What is the value of the 3 in 93,149? = 3000 (I) · What is the value of the 8 in 1,989? = 80 (G) · What is the value of the 9 in 4,971? = 900 (A)

Clue 2 (Multiplication facts (1-12)): "THE SUSPECT HELD THE REEL WITH RIGHT HAND"

$7 \times 7 = 49$ (T) · $2 \times 10 = 20$ (R) · $11 \times 9 = 99$ (D) · $10 \times 7 = 70$ (H) · $9 \times 6 = 54$ (U) · $4 \times 12 = 48$ (G) · $11 \times 1 = 11$ (W) · $2 \times 12 = 24$ (I) · $8 \times 7 = 56$ (S) · $10 \times 10 = 100$ (E) · $7 \times 4 = 28$ (L) · $8 \times 10 = 80$ (P) · $4 \times 4 = 16$ (A) · $7 \times 5 = 35$ (N) · $8 \times 5 = 40$ (C)

Clue 3 (Rounding): "A LOUD MEGA MEGAPHONE STOPPED THE VILLAIN"

Round 1,267 to the nearest hundred = 1300 (A) · Round 111 to the nearest ten = 110 (M) · Round 4,682 to the nearest thousand = 5000 (T) · Round 91 to the nearest ten = 90 (D) · Round 1,051 to the nearest hundred = 1100 (H) · Round 227 to the nearest ten = 230 (N) · Round 367 to the nearest ten = 370 (L) · Round 515 to the nearest hundred = 500 (U) · Round 346 to the nearest hundred = 300 (G) · Round 6,588 to the nearest thousand = 7000 (I) · Round 28 to the nearest ten = 30 (V) · Round 735 to the nearest hundred = 700 (O) · Round 2,895 to the nearest hundred = 2900 (S) · Round 1,825 to the nearest thousand = 2000 (P) · Round 2,602 to the nearest thousand = 3000 (E)

Clue 4 (Bar model word problems): "SILVER HAIR"

The prop master shares 198 rubber brain equally among 3 teams. How many rubber brain does each team get? = 66 (S) · There were 30 foam arm in all. 15 foam arm were used. How many foam arm are left? = 15 (E) · The prop master used $\frac{1}{3}$ of the rubber brain on the first day. The other 82 rubber brain were used the next day. How many rubber brain were there in all? = 123 (I) · The prop master used $\frac{4}{6}$ of the foam arm on the first day. The other 16 foam arm were used the next day. How many foam arm were there in all? = 48 (R) · The prop master used $\frac{1}{2}$ of the fake skeleton on the first day. The other 65 fake skeleton were used the next day. How many fake skeleton were there in all? = 130 (H) · The prop master has 192 fake skeleton, packed 2 to a bag. How many bags can be filled? = 96 (L) · The red team has 125 fake skeleton and the blue team has 22 fake skeleton. How many more fake skeleton does the red team have? = 103 (V)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Ava Hayes

$36 \div 4 = 9$ · $8 \div 4 = 2$ · $16 \div 4 = 4$ · $21 \div 7 = 3$ · $72 \div 9 = 8$ · $120 \div 12 = 10$ · $11 \div 11 = 1$ · $108 \div 9 = 12$ · $88 \div 8 = 11$ · $12 \div 2 = 6$ · $7 \div 1 = 7$