The ACME Studio Heist

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

Detective: _____ **Date:** _____

The Golden Carrot Trophy has vanished from the ACME Cartoon Studio! Director Duck needs the mystery squad to find the thief before tonight's live show.

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 studio bandit is _____

Possible suspects

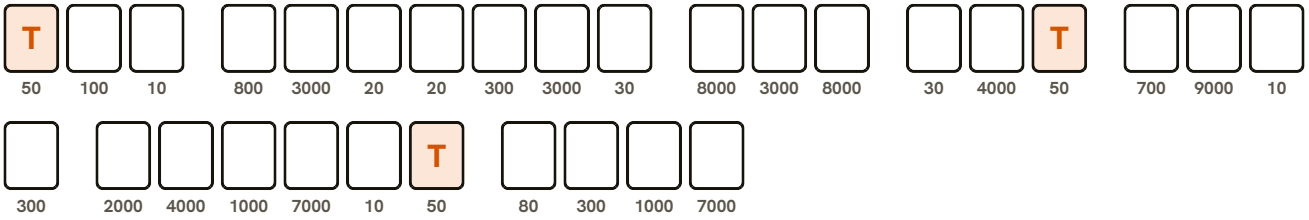
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	MAIN TRICK	ACME GADGET	DOMINANT HAND	HAIR STYLE	CARTOON TRAP
Hettie Witch	giant mallet swing	spring shoes	left-handed	tuft of hair	bubble gum
Franklin Leghorn	portable tunnel	spring shoes	left-handed	tuft of hair	anvil trap
Robby Runner	disguise box transform	rocket pack	right-handed	tuft of hair	bubble gum
Mortimer Frog	disguise box transform	spring shoes	right-handed	bald head	bubble gum
Tweeter Bird	super speed dash	rocket pack	left-handed	tuft of hair	giant magnet
Elwood Fudd	portable tunnel	spring shoes	left-handed	tuft of hair	giant magnet
Barney Dog	portable tunnel	paint hole	left-handed	bald head	giant magnet
Speedy Sam	bouncing spring jump	paint hole	left-handed	slicked back hair	giant magnet
Wylie Coyote	portable tunnel	jet roller skates	left-handed	tuft of hair	giant magnet
Penelope Poodle	disguise box transform	spring shoes	right-handed	slicked back hair	giant magnet
Hubert Mouse	bouncing spring jump	spring shoes	left-handed	slicked back hair	bubble gum
Yancey Sam	portable tunnel	paint hole	left-handed	tuft of hair	giant magnet
Marcus Hound	giant mallet swing	paint hole	right-handed	tuft of hair	bubble gum
Gus Gossamer	disguise box transform	spring shoes	right-handed	bald head	anvil trap
Bertram Mouse	giant mallet swing	giant eraser	right-handed	bald head	anvil trap
Penny Pussycat	super speed dash	spring shoes	right-handed	slicked back hair	bubble gum
Dathan Drake	super speed dash	rocket pack	left-handed	slicked back hair	giant magnet
Tazzy Tasmanian	giant mallet swing	jet roller skates	left-handed	tuft of hair	bubble gum
Sylvie Cat	disguise box transform	paint hole	left-handed	tuft of hair	bubble gum
Barnaby Bunny	bouncing spring jump	spring shoes	right-handed	tuft of hair	giant magnet
Granny Goose	bouncing spring jump	giant eraser	left-handed	tuft of hair	giant magnet

CLUE 1 Place value

Detective Bunny examined the digit readout on the ACME security keypad to check the vault code.

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



What is the value of the 5 in 354? ☐ → T

What is the value of the 1 in 61,434? ☐ → C

What is the value of the 7 in 2,799? ☐ → U

What is the value of the 2 in 826? ☐ → L

What is the value of the 2 in 2,378? ☐ → R

What is the value of the 3 in 3,912? ☐ → I

What is the value of the 8 in 28,532? ☐ → D

What is the value of the 8 in 285? ☐ → P

What is the value of the 8 in 873? ☐ → V

What is the value of the 7 in 7,280? ☐ → K

What is the value of the 1 in 9,517? ☐ → E

What is the value of the 3 in 635? ☐ → N

What is the value of the 9 in 49,480? ☐ → S

What is the value of the 3 in 360? ☐ → A

What is the value of the 1 in 7,160? ☐ → H

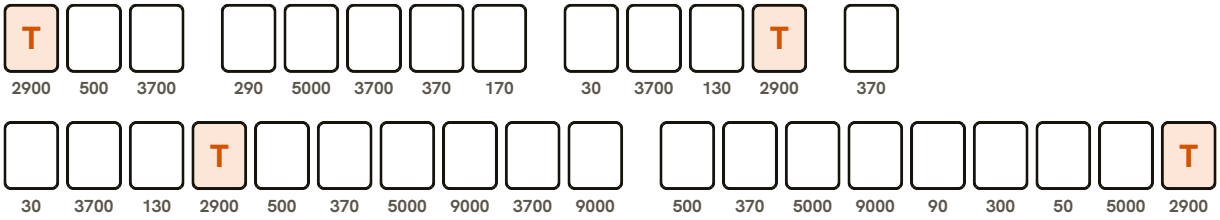
What is the value of the 4 in 94,110? ☐ → O

Scratch space:

CLUE 2 Rounding

> The cartoon studio radar screen only shows rounded speed numbers for fast suspects.

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



Round 2,929 to the nearest hundred ☐ → **T**

Round 9,180 to the nearest thousand ☐ → **D**

Round 508 to the nearest hundred ☐ → **H**

Round 305 to the nearest hundred ☐ → **R**

Round 94 to the nearest ten ☐ → **P**

Round 128 to the nearest ten ☐ → **F**

Round 5,275 to the nearest thousand ☐ → **N**

Round 3,748 to the nearest hundred ☐ → **E**

Round 48 to the nearest ten ☐ → **I**

Round 288 to the nearest ten ☐ → **S**

Round 170 to the nearest ten ☐ → **K**

Round 30 to the nearest ten ☐ → **L**

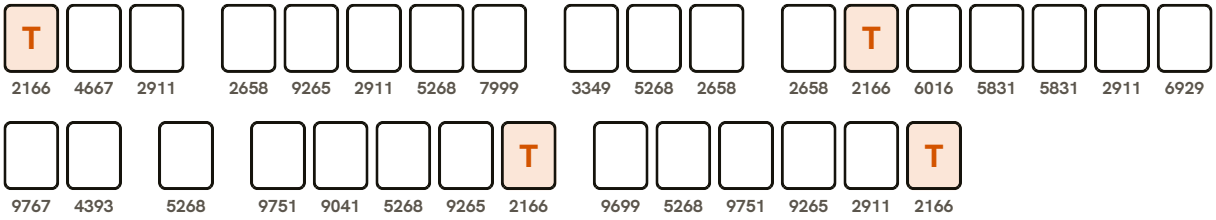
Round 373 to the nearest ten ☐ → **A**

Scratch space:

CLUE 3 Addition

The detective tallied up all the extra ACME supplies left scattered near the prop room.

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



967 + 1199 = ☐ → T

1826 + 2567 = ☐ → Y

2496 + 2171 = ☐ → H

4060 + 4981 = ☐ → I

1674 + 1237 = ☐ → E

1565 + 1093 = ☐ → S

1577 + 1772 = ☐ → W

6091 + 3676 = ☐ → B

4966 + 3033 = ☐ → K

3745 + 2086 = ☐ → P

5134 + 4565 = ☐ → M

2522 + 2746 = ☐ → A

6421 + 3330 = ☐ → G

3884 + 2132 = ☐ → O

4284 + 4981 = ☐ → N

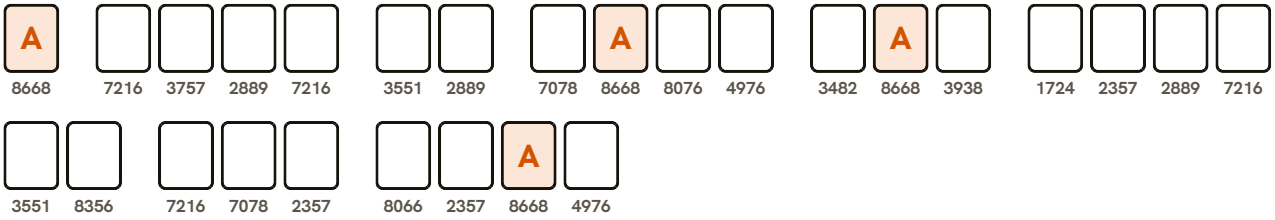
4704 + 2225 = ☐ → D

Scratch space:

CLUE 4 Subtraction

The detective measured how many feet of giant rubber band were missing from the trap.

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



12333 - 3665 = ☐ → A

9346 - 1270 = ☐ → I

6780 - 3298 = ☐ → W

7190 - 112 = ☐ → H

5744 - 2855 = ☐ → F

10583 - 2517 = ☐ → G

8982 - 1766 = ☐ → T

5984 - 3627 = ☐ → E

5629 - 3905 = ☐ → L

5346 - 1408 = ☐ → S

9413 - 1057 = ☐ → N

7060 - 3303 = ☐ → U

4785 - 1234 = ☐ → O

6065 - 1089 = ☐ → R

Scratch space:

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

> The detective shared the found cartoon clues equally among the mystery team crates.

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:

42 ÷ 6 = ☐	12 ÷ 3 = ☐	48 ÷ 6 = ☐	12 ÷ 12 = ☐	27 ÷ 3 = ☐
20 ÷ 4 = ☐	2 ÷ 1 = ☐	55 ÷ 5 = ☐	60 ÷ 5 = ☐	60 ÷ 10 = ☐
80 ÷ 8 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain popped out of a disguise box, then drew a fake paint hole.
2. The villain dashed through the studio, then drew a fake paint hole.
3. The villain bounced high into the air, then wiped clues with a giant eraser.
4. The villain painted a sneaky tunnel, then leaped using spring shoes.
5. The villain popped out of a disguise box, then leaped using spring shoes.
6. The villain popped out of a disguise box, then zipped away on jet roller skates.
7. The villain painted a sneaky tunnel, then zipped away on jet roller skates.
8. The villain painted a sneaky tunnel, then drew a fake paint hole.
9. The villain swung a massive mallet, then leaped using spring shoes.
10. The villain popped out of a disguise box, then wiped clues with a giant eraser.
11. The villain bounced high into the air, then blasted off with a rocket pack.
12. The villain dashed through the studio, then leaped using spring shoes.

TEACHER / PARENT

Answer Key

The ACME Studio Heist

Culprit: Granny Goose

bouncing spring jump · giant eraser · left-handed · tuft of hair · giant magnet

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DID NOT USE A ROCKET PACK"

What is the value of the 5 in 354? = 50 (T) · What is the value of the 1 in 61,434? = 1000 (C) · What is the value of the 7 in 2,799? = 700 (U) · What is the value of the 2 in 826? = 20 (L) · What is the value of the 2 in 2,378? = 2000 (R) · What is the value of the 3 in 3,912? = 3000 (I) · What is the value of the 8 in 28,532? = 8000 (D) · What is the value of the 8 in 285? = 80 (P) · What is the value of the 8 in 873? = 800 (V) · What is the value of the 7 in 7,280? = 7000 (K) · What is the value of the 1 in 9,517? = 10 (E) · What is the value of the 3 in 635? = 30 (N) · What is the value of the 9 in 49,480? = 9000 (S) · What is the value of the 3 in 360? = 300 (A) · What is the value of the 1 in 7,160? = 100 (H) · What is the value of the 4 in 94,110? = 4000 (O)

Clue 2 (Rounding): "THE SNEAK LEFT A LEFTHANDED HANDPRINT"

Round 2,929 to the nearest hundred = 2900 (T) · Round 9,180 to the nearest thousand = 9000 (D) · Round 508 to the nearest hundred = 500 (H) · Round 305 to the nearest hundred = 300 (R) · Round 94 to the nearest ten = 90 (P) · Round 128 to the nearest ten = 130 (F) · Round 5,275 to the nearest thousand = 5000 (N) · Round 3,748 to the nearest hundred = 3700 (E) · Round 48 to the nearest ten = 50 (I) · Round 288 to the nearest ten = 290 (S) · Round 170 to the nearest ten = 170 (K) · Round 30 to the nearest ten = 30 (L) · Round 373 to the nearest ten = 370 (A)

Clue 3 (Addition): "THE SNEAK WAS STOPPED BY A GIANT MAGNET"

967 + 1199 = 2166 (T) · 1826 + 2567 = 4393 (Y) · 2496 + 2171 = 4667 (H) · 4060 + 4981 = 9041 (I) · 1674 + 1237 = 2911 (E) · 1565 + 1093 = 2658 (S) · 1577 + 1772 = 3349 (W) · 6091 + 3676 = 9767 (B) · 4966 + 3033 = 7999 (K) · 3745 + 2086 = 5831 (P) · 5134 + 4565 = 9699 (M) · 2522 + 2746 = 5268 (A) · 6421 + 3330 = 9751 (G) · 3884 + 2132 = 6016 (O) · 4284 + 4981 = 9265 (N) · 4704 + 2225 = 6929 (D)

Clue 4 (Subtraction): "A TUFT OF HAIR WAS LEFT ON THE GEAR"

12333 - 3665 = 8668 (A) · 9346 - 1270 = 8076 (I) · 6780 - 3298 = 3482 (W) · 7190 - 112 = 7078 (H) · 5744 - 2855 = 2889 (F) · 10583 - 2517 = 8066 (G) · 8982 - 1766 = 7216 (T) · 5984 - 3627 = 2357 (E) · 5629 - 3905 = 1724 (L) · 5346 - 1408 = 3938 (S) · 9413 - 1057 = 8356 (N) · 7060 - 3303 = 3757 (U) · 4785 - 1234 = 3551 (O) · 6065 - 1089 = 4976 (R)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Granny Goose

42 ÷ 6 = 7 · 12 ÷ 3 = 4 · 48 ÷ 6 = 8 · 12 ÷ 12 = 1 · 27 ÷ 3 = 9 · 20 ÷ 4 = 5 · 2 ÷ 1 = 2 · 55 ÷ 5 = 11 · 60 ÷ 5 = 12 · 60 ÷ 10 = 6 · 80 ÷ 8 = 10