



The Case of the Reluctant Contestants

Grade 5 math · Multiplication, Rounding, Skip counting, Place value, Division · Reading level grades 5-6

Detective: _____ Date: _____

Welcome to the Glittering Dome of Doom! Or, as our suspects call it, 'The Place We Were Dragged Into For No Reason.' Someone has locked the exit doors and hidden the host's golden microphone. The suspects are all standing around looking confused, annoyed, and constantly muttering that they don't know what is going on and they do not want to do this. We must find out who actually took the microphone so we can all go home!

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 Saboteur is _____

Possible suspects

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

NAME	VIBE	DISTRACTION	ACCESSORY	HAIRSTYLE	BRIBE
Muttering Mark	Clueless shrug	Drinking free soda	Right-handed watch	Spiky gel	Loud buzzer noise
Puzzled Pam	Glaring at camera	Sitting on floor	Right-handed watch	Neat parting	Complimentary taxi
Weary Wendy	Sighing loudly	Sitting on floor	Left-handed watch	Spiky gel	Complimentary taxi
Doubtful Dan	Clueless shrug	Drinking free soda	Right-handed watch	Neat parting	Complimentary taxi
Shy Sarah	Clueless shrug	Drinking free soda	Left-handed watch	Spiky gel	Complimentary taxi
Hasty Harry	Glaring at camera	Taking a nap	Left-handed watch	Spiky gel	Loud buzzer noise
Reluctant Rita	Sighing loudly	Drinking free soda	Left-handed watch	Messy bun	Loud buzzer noise
Tired Tim	Checking phone	Taking a nap	Left-handed watch	Neat parting	Complimentary taxi
Restless Rose	Glaring at camera	Taking a nap	Right-handed watch	Neat parting	Complimentary taxi
Bored Bella	Sighing loudly	Taking a nap	Right-handed watch	Neat parting	Loud buzzer noise
Silent Sally	Glaring at camera	Drafting complaint	Left-handed watch	Neat parting	Complimentary taxi
Moody Molly	Sighing loudly	Drinking free soda	Right-handed watch	Spiky gel	Loud buzzer noise
Annoyed Abby	Checking phone	Drafting complaint	Left-handed watch	Neat parting	Complimentary taxi
Anxious Anna	Glaring at camera	Drafting complaint	Left-handed watch	Neat parting	Free pizza voucher
Yawning Yann	Clueless shrug	Untying shoes	Left-handed watch	Neat parting	Complimentary taxi
Passive Paul	Sighing loudly	Taking a nap	Right-handed watch	Spiky gel	Complimentary taxi
Gloomy Gary	Asking to leave	Sitting on floor	Left-handed watch	Neat parting	Loud buzzer noise
Indifferent Ian	Clueless shrug	Taking a nap	Left-handed watch	Neat parting	Complimentary taxi
Boring Bob	Asking to leave	Sitting on floor	Right-handed watch	Messy bun	Complimentary taxi
Clueless Chris	Sighing loudly	Drinking free soda	Right-handed watch	Spiky gel	Free pizza voucher
Frowning Fiona	Asking to leave	Drinking free soda	Left-handed watch	Messy bun	Complimentary taxi

CLUE 1

Multiplication facts (1-12)

We tried counting the rows of folding chairs the contestants were ignoring. Each row had the same number of chairs, making it easy to multiply.

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

A number line from 0 to 100 with boxes for numbers. The boxes are arranged in two rows. The first row contains boxes for 8, 64, 84, 108, 28, 3, 3, 60, 28, 6, 28, 9, 6, 96, and 8. The second row contains boxes for 2, 6, 8, 50, 28, 6, 90, 9, 64, 96, 84, and 9. The boxes for 8, 64, 84, 108, 28, 3, 3, 60, 28, 6, 28, 9, 6, 96, and 8 are shaded orange and contain the letter 'T'. The boxes for 2, 6, 8, 50, 28, 6, 90, 9, 64, 96, 84, and 9 are white and empty.

$$2 \times 4 = \boxed{} \rightarrow \boxed{\text{T}}$$

$10 \times 5 = \boxed{} \rightarrow \boxed{\text{Y}}$

$1 \times 3 = \boxed{} \rightarrow \boxed{\text{L}}$

$1 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{U}}$

$1 \times 9 = \boxed{} \rightarrow \boxed{\mathbf{S}}$

$$8 \times 8 = \boxed{} \rightarrow \boxed{\text{H}}$$

$1 \times 6 = \boxed{} \rightarrow \boxed{\mathbf{N}}$

$4 \times 7 = \boxed{} \rightarrow \boxed{1}$

$$8 \times 12 = \boxed{} \rightarrow \boxed{0}$$

$5 \times 12 = \boxed{} \rightarrow \boxed{\text{A}}$

$10 \times 9 = \boxed{} \rightarrow \boxed{\mathbf{G}}$

$$9 \times 12 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$12 \times 7 = \boxed{} \rightarrow \boxed{\text{E}}$

Scratch space:

CLUE 2

Rounding

The stadium scoreboard was glitched and only showed the total time rounded to the nearest ten minutes.

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

L																	
1300	4300	200	1700	5000	900	1700	90	1100	20	1700	2900	900	7000	5000	900	20	

200	2000	130	70	9000	290	230	1700	1100	4300	9000	2000	2000	2900

Round 1,297 to the nearest hundred

→ **L**

Round 92 to the nearest ten

→ **C**

Round 293 to the nearest ten

→ **B**

Round 1,655 to the nearest hundred

→ **T**

Round 23 to the nearest ten

→ **S**

Round 129 to the nearest ten

→ **U**

Round 6,969 to the nearest thousand

→ **P**

Round 9,416 to the nearest thousand

→ **D**

Round 74 to the nearest ten

→ **N**

Round 943 to the nearest hundred

→ **A**

Round 192 to the nearest hundred

→ **F**

Round 5,206 to the nearest thousand

→ **W**

Round 2,073 to the nearest thousand

→ **O**

Round 229 to the nearest ten

→ **Y**

Round 1,136 to the nearest hundred

→ **H**

Round 2,865 to the nearest hundred

→ **R**

Round 4,305 to the nearest hundred

→ **E**

Scratch space:

CLUE 3 Skip counting

The floor tiles had numbers on them, and the suspect escaped by stepping only on multiples of three.

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

T							T			T								
33	24	65	27	15	14	30	33	8	14	33	55	27	36	70	42	25	65	60

		T		T					
15	14	33	9	33	24	65	90	8	140

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 → **T**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 → **B**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 → **C**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 → **P**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **Y**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, __, 18, 21 → **I**

Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 → **A**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 → **J**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 → **D**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 → **E**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **O**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **M**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 → **U**

Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 → **H**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 → **N**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **L**

Scratch space:

CLUE 4 Place value

A digital safe in the lobby required us to look at the tens and hundreds digits of the security code to unlock the clue.

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

W																
80	100	10	70	900	30	3000	8000	60	100	4000	10	100	1000	200	500	50
2000	200	4000	8000	7000	90	400	200	1000	70	40	20					

What is the value of the 8 in 72,082? → **W**

What is the value of the 5 in 42,257? → **Y**

What is the value of the 7 in 693,374? → **O**

What is the value of the 6 in 853,263? → **P**

What is the value of the 5 in 139,546? → **L**

What is the value of the 9 in 456,943? → **U**

What is the value of the 8 in 28,417? → **A**

What is the value of the 1 in 755,102? → **E**

What is the value of the 2 in 892,513? → **S**

What is the value of the 4 in 69,545? → **M**

What is the value of the 4 in 20,483? → **H**

What is the value of the 2 in 73,420? → **B**

What is the value of the 1 in 580,614? → **F**

What is the value of the 3 in 986,639? → **N**

What is the value of the 3 in 43,462? → **D**

What is the value of the 4 in 24,380? → **R**

What is the value of the 1 in 61,207? → **C**

What is the value of the 2 in 18,258? → **T**

What is the value of the 7 in 217,903? → **I**

What is the value of the 9 in 21,693? → **G**

Scratch space:

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

We had to divide the leftover pizza slices equally among the tired crew members to get them to talk.

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:

$60 \div 5 = \boxed{}$

$50 \div 10 = \boxed{}$

$12 \div 12 = \boxed{}$

$27 \div 3 = \boxed{}$

$40 \div 4 = \boxed{}$

$48 \div 8 = \boxed{}$

$96 \div 12 = \boxed{}$

$3 \div 1 = \boxed{}$

$8 \div 2 = \boxed{}$

$56 \div 8 = \boxed{}$

$55 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain glares directly at the camera, then drafts a long email complaint.
2. The villain checks their phone constantly, then drafts a long email complaint.
3. The villain sighs extremely loudly, then unties both of their shoes.
4. The villain checks their phone constantly, then drinks three cans of free soda.
5. The villain shrugs cluelessly, then takes a very loud nap.
6. The villain sighs extremely loudly, then drafts a long email complaint.
7. The villain asks how to leave, then drinks three cans of free soda.
8. The villain asks how to leave, then unties both of their shoes.
9. The villain checks their phone constantly, then sits flat on the dusty floor.
10. The villain glares directly at the camera, then drinks three cans of free soda.
11. The villain asks how to leave, then takes a very loud nap.
12. The villain checks their phone constantly, then takes a very loud nap.

Answer Key

The Case of the Reluctant Contestants

Culprit: Annoyed Abby

Checking phone · Drafting complaint · Left-handed watch · Neat parting · Complimentary taxi

Trail: Start 21 → Clue 1 20 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN IS NOT UNTYING SHOES"

$2 \times 4 = 8$ (T) · $10 \times 5 = 50$ (Y) · $1 \times 3 = 3$ (L) · $1 \times 2 = 2$ (U) · $1 \times 9 = 9$ (S) · $8 \times 8 = 64$ (H) · $1 \times 6 = 6$ (N) · $4 \times 7 = 28$ (I) · $8 \times 12 = 96$ (O) · $5 \times 12 = 60$ (A) · $10 \times 9 = 90$ (G) · $9 \times 12 = 108$ (V) · $12 \times 7 = 84$ (E)

Clue 2 (Rounding): "LEFT WATCH STRAP WAS FOUND BY THE DOOR"

Round 1,297 to the nearest hundred = 1300 (L) · Round 92 to the nearest ten = 90 (C) · Round 293 to the nearest ten = 290 (B) · Round 1,655 to the nearest hundred = 1700 (T) · Round 23 to the nearest ten = 20 (S) · Round 129 to the nearest ten = 130 (U) · Round 6,969 to the nearest thousand = 7000 (P) · Round 9,416 to the nearest thousand = 9000 (D) · Round 74 to the nearest ten = 70 (N) · Round 943 to the nearest hundred = 900 (A) · Round 192 to the nearest hundred = 200 (F) · Round 5,206 to the nearest thousand = 5000 (W) · Round 2,073 to the nearest thousand = 2000 (O) · Round 229 to the nearest ten = 230 (Y) · Round 1,136 to the nearest hundred = 1100 (H) · Round 2,865 to the nearest hundred = 2900 (R) · Round 4,305 to the nearest hundred = 4300 (E)

Clue 3 (Skip counting): "THEY INSTANTLY JUMPED INTO THE CAB"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (T) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (B) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (P) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (Y) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, __, 18, 21 = 15 (I) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (A) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (J) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (E) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (O) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (M) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 = 70 (U) · Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 = 30 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 = 24 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (N) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (L)

Clue 4 (Place value): "WE FOUND A PERFECTLY STRAIGHT COMB"

What is the value of the 8 in 72,082? = 80 (W) · What is the value of the 5 in 42,257? = 50 (Y) · What is the value of the 7 in 693,374? = 70 (O) · What is the value of the 6 in 853,263? = 60 (P) · What is the value of the 5 in 139,546? = 500 (L) · What is the value of the 9 in 456,943? = 900 (U) · What is the value of the 8 in 28,417? = 8000 (A) · What is the value of the 1 in 755,102? = 100 (E) · What is the value of the 2 in 892,513? = 2000 (S) · What is the value of the 4 in 69,545? = 40 (M) · What is the value of the 4 in 20,483? = 400 (H) · What is the value of the 2 in 73,420? = 20 (B) · What is the value of the 1 in 580,614? = 10 (F) · What is the value of the 3 in 986,639? = 30 (N) · What is the value of the 3 in 43,462? = 3000 (D) · What is the value of the 4 in 24,380? = 4000 (R) · What is the value of the 1 in 61,207? = 1000 (C) · What is the value of the 2 in 18,258? = 200 (T) · What is the value of the 7 in 217,903? = 7000 (I) · What is the value of the 9 in 21,693? = 90 (G)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Annoyed Abby

$60 \div 5 = 12$ · $50 \div 10 = 5$ · $12 \div 12 = 1$ · $27 \div 3 = 9$ · $40 \div 4 = 10$ · $48 \div 8 = 6$ · $96 \div 12 = 8$ · $3 \div 1 = 3$ · $8 \div 2 = 4$ · $56 \div 8 = 7$ · $55 \div 5 = 11$