



The Great Budgie Pop Concert Mystery

Grade 6 math · Rounding, Percentages, Exponents, Order of operations, Division · Reading level grades 7-9

Detective: _____ Date: _____

During soundcheck at the arena, the headlining boyband's lucky mascot, a tiny green budgie named Featherby, was kidnapped! The culprit vanished into the backstage maze, leaving behind feathered clues and musical gear.

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 boyband intruder is _____

Possible suspects

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

NAME	VOCAL SKILL	STAGE GEAR	HANDEDNESS	HAIRSTYLE	PHOBIA
Mango	Mic Spin	Feather Cloak	Right Handed	Spiky Chestnut	Sudden Drafts
Buddy	Harmony Blast	Perch Cannon	Right Handed	Curly Brunette	Sudden Drafts
Kiwi	Mic Spin	Golden Cage	Right Handed	Curly Brunette	Sudden Drafts
Harry	Dance Leap	Golden Cage	Left Handed	Bleached Blonde	Squeaky Toys
Toby	Dance Leap	Seed Shooter	Right Handed	Bleached Blonde	Shiny Mirrors
Sammy	Acoustic Solo	Mirror Shield	Right Handed	Curly Brunette	Squeaky Toys
Sky	Mic Spin	Feather Cloak	Right Handed	Curly Brunette	Sudden Drafts
Rio	Harmony Blast	Feather Cloak	Right Handed	Spiky Chestnut	Sudden Drafts
Pippin	Acoustic Solo	Seed Shooter	Left Handed	Bleached Blonde	Shiny Mirrors
Ziggy	Harmony Blast	Seed Shooter	Left Handed	Curly Brunette	Sudden Drafts
Cleo	Falsetto Scream	Perch Cannon	Left Handed	Spiky Chestnut	Squeaky Toys
Dusty	Falsetto Scream	Seed Shooter	Right Handed	Spiky Chestnut	Sudden Drafts
Sunny	Acoustic Solo	Mirror Shield	Right Handed	Curly Brunette	Shiny Mirrors
Penny	Dance Leap	Golden Cage	Right Handed	Curly Brunette	Sudden Drafts
Ollie	Mic Spin	Golden Cage	Left Handed	Spiky Chestnut	Shiny Mirrors
Niall	Acoustic Solo	Seed Shooter	Right Handed	Bleached Blonde	Squeaky Toys
Chloe	Falsetto Scream	Perch Cannon	Left Handed	Bleached Blonde	Shiny Mirrors
Jasper	Falsetto Scream	Seed Shooter	Right Handed	Curly Brunette	Sudden Drafts
Louis	Mic Spin	Perch Cannon	Left Handed	Curly Brunette	Squeaky Toys
Frankie	Dance Leap	Perch Cannon	Left Handed	Spiky Chestnut	Sudden Drafts
Charlie	Mic Spin	Feather Cloak	Left Handed	Curly Brunette	Shiny Mirrors

CLUE 1

The arena security scanner rounds all weight measurements to the nearest ten grams. Reviewing the entry log gives us our first break.

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

230 2000 110 370 170 700 4300 110 290 3000 1100 110 370 700 1100 230 300 370 110

30 200 110 290 20 2000 20 30 700 700 1100 700

Round 228 to the nearest ten $\rightarrow$ **T**

Round 369 to the nearest ten $\rightarrow$ **S**

Round 324 to the nearest hundred → **U**

Round 1,057 to the nearest hundred $\rightarrow$ ☐

Round 290 to the nearest ten $\rightarrow$ **R**

Round 112 to the nearest ten → **E**

Round 169 to the nearest ten $\rightarrow$ |

Round 733 to the nearest hundred $\rightarrow$ **N**

Round 4,331 to the nearest hundred → **G**

Round 204 to the nearest hundred $\rightarrow$ **P**

Round 16 to the nearest ten $\rightarrow$ **C**

Round 1,962 to the nearest thousand → **H**

Round 3,059 to the nearest thousand → **D**

Round 32 to the nearest ten → **A**

Scratch space:

CLUE 2

The stadium audio board shows percentage levels for stage monitors. Calculating the missing mix yields the next clue.

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

A 3x12 grid of boxes. The first row contains the following sequence: an orange box with 'T' (25), an empty box (29), an empty box (14), an empty box (5), an empty box (34), an empty box (5), an empty box (26), an empty box (14), an empty box (24), an orange box with 'T' (25), an empty box (29), an empty box (14), an empty box (19), an empty box (17), an orange box with 'T' (25), an empty box (29), and an empty box (14). The second row contains: an empty box (1), an empty box (10), an empty box (24), an empty box (11), an empty box (10), an orange box with 'T' (25), an empty box (29), an orange box with 'T' (25), an empty box (29), an empty box (14), an empty box (10), an empty box (31), an empty box (31), an empty box (10), an empty box (22), an empty box (29), and an orange box with 'T' (25). The third row contains: an empty box (29), an empty box (40), an empty box (6), and an empty box (17).

5% of 500 = → **T**

10% of 260 = → **P**

25% of 116 = → **H**

20% of 70 = → **E**

10% of 110 = → **W**

25% of 68 = → **D**

40% of 55 = → **G**

20% of 170 = → **U**

50% of 2 = → **M**

10% of 60 = → **N**

40% of 25 = →

50% of 48 = → **C**

50% of 80 = → **A**

50% of 38 = → **L**

10% of 50 = → **S**

20% of 155 = → **R**

Scratch space:

CLUE 3 Exponents

The flock of backstage carrier budgies doubles its numbers every hour. Exponents reveal the secret passcode to the dressing room.

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

A									A									
196	169	16	225	225	128	81	225	36	196	9	400	169	400	343	27	27	128	225
400	121	128	169	216	81	4	128	36	144	343	289	225						

$14^2 = \square \rightarrow \text{A}$	$6^2 = \square \rightarrow \text{R}$	$7^3 = \square \rightarrow \text{O}$	$3^2 = \square \rightarrow \text{F}$
$17^2 = \square \rightarrow \text{L}$	$3^3 = \square \rightarrow \text{P}$	$13^2 = \square \rightarrow \text{S}$	$11^2 = \square \rightarrow \text{H}$
$2^7 = \square \rightarrow \text{E}$	$20^2 = \square \rightarrow \text{T}$	$4^2 = \square \rightarrow \text{U}$	$6^3 = \square \rightarrow \text{I}$
$15^2 = \square \rightarrow \text{D}$	$12^2 = \square \rightarrow \text{C}$	$3^4 = \square \rightarrow \text{N}$	$2^2 = \square \rightarrow \text{G}$

Scratch space:

Order of operations

A complicated rehearsal schedule on the call sheet requires evaluating mixed operations to pinpoint the timeline.

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

21 37 49 46 33 22 49 37 10 32 12 12 32 25 12 49 71 10 13 25

79 32 49 32 46 32 17 12 10 32 71 49 31 8 21

$$8 \times 4 - 11 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$8 \times 6 - 2 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$2 + 2 \times 4 = \boxed{} \rightarrow \boxed{\text{N}}$$

$19 + 2 \times 6 = \boxed{} \rightarrow \boxed{\text{M}}$

$9 + 4 \times 2 = \boxed{} \rightarrow \boxed{\text{F}}$

$$3 \times 12 - 4 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$4 \times 10^{-7} = \boxed{} \rightarrow \boxed{\text{Y}}$$

$6 \times 5 - 8 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$65 + 7 \times 2 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$1 + 3 \times 4 = \boxed{} \rightarrow \boxed{\mathbf{D}}$$

$$7 \times 3 - 9 = \boxed{} \rightarrow \boxed{\mathbf{T}}$$

$$8 \times 10 - 9 = \boxed{} \rightarrow \mathbf{A}$$

$$3 \times 10 - 5 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$$8 \times 7 - 19 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$25 + 8 \times 3 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$2 + 2 \times 3 = \boxed{} \rightarrow \boxed{}$$

Scratch space:

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

Dividing the leftover four snacks equally among the crew unveils the final piece of evidence.

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:

$80 \div 8 = \boxed{}$

$24 \div 3 = \boxed{}$

$30 \div 6 = \boxed{}$

$36 \div 9 = \boxed{}$

$99 \div 9 = \boxed{}$

$24 \div 8 = \boxed{}$

$56 \div 8 = \boxed{}$

$24 \div 2 = \boxed{}$

$30 \div 5 = \boxed{}$

$27 \div 3 = \boxed{}$

$22 \div 11 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain executed a mic spin, then locked a golden cage.
2. The villain sang a sweet harmony, then launched a perch cannon.
3. The villain strummed a loud chord, then fired a seed shooter.
4. The villain strummed a loud chord, then raised a mirror shield.
5. The villain belted out a high note, then fired a seed shooter.
6. The villain sang a sweet harmony, then swung a feather cloak.
7. The villain strummed a loud chord, then locked a golden cage.
8. The villain leaped across the stage, then locked a golden cage.
9. The villain sang a sweet harmony, then fired a seed shooter.
10. The villain executed a mic spin, then swung a feather cloak.
11. The villain belted out a high note, then launched a perch cannon.
12. The villain leaped across the stage, then raised a mirror shield.

Answer Key

The Great Budgie Pop Concert Mystery

Culprit: Kiwi

Mic Spin · Golden Cage · Right Handed · Curly Brunette · Sudden Drafts

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SINGER DOES NOT USE A PERCH CANNON"

Round 228 to the nearest ten = 230 (T) · Round 369 to the nearest ten = 370 (S) · Round 324 to the nearest hundred = 300 (U) · Round 1,057 to the nearest hundred = 1100 (O) · Round 290 to the nearest ten = 290 (R) · Round 112 to the nearest ten = 110 (E) · Round 169 to the nearest ten = 170 (I) · Round 733 to the nearest hundred = 700 (N) · Round 4,331 to the nearest hundred = 4300 (G) · Round 204 to the nearest hundred = 200 (P) · Round 16 to the nearest ten = 20 (C) · Round 1,962 to the nearest thousand = 2000 (H) · Round 3,059 to the nearest thousand = 3000 (D) · Round 32 to the nearest ten = 30 (A)

Clue 2 (Percentages): "THE SUSPECT HELD THE MIC WITH THEIR RIGHT HAND"

5% of 500 = 25 (T) · 10% of 260 = 26 (P) · 25% of 116 = 29 (H) · 20% of 70 = 14 (E) · 10% of 110 = 11 (W) · 25% of 68 = 17 (D) · 40% of 55 = 22 (G) · 20% of 170 = 34 (U) · 50% of 2 = 1 (M) · 10% of 60 = 6 (N) · 40% of 25 = 10 (I) · 50% of 48 = 24 (C) · 50% of 80 = 40 (A) · 50% of 38 = 19 (L) · 10% of 50 = 5 (S) · 20% of 155 = 31 (R)

Clue 3 (Exponents): "A SUDDEN DRAFT STOPPED THE SINGER COLD"

$14^2 = 196$ (A) · $6^2 = 36$ (R) · $7^3 = 343$ (O) · $3^2 = 9$ (F) · $17^2 = 289$ (L) · $3^3 = 27$ (P) · $13^2 = 169$ (S) · $11^2 = 121$ (H) · $2^7 = 128$ (E) · $20^2 = 400$ (T) · $4^2 = 16$ (U) · $6^3 = 216$ (I) · $15^2 = 225$ (D) · $12^2 = 144$ (C) · $3^4 = 81$ (N) · $2^2 = 4$ (G)

Clue 4 (Order of operations): "CURLY BRUNETTE STRANDS WERE LEFT NEAR MIC"

$8 \times 4 - 11 = 21$ (C) · $8 \times 6 - 2 = 46$ (L) · $2 + 2 \times 4 = 10$ (N) · $19 + 2 \times 6 = 31$ (M) · $9 + 4 \times 2 = 17$ (F) · $3 \times 12 - 4 = 32$ (E) · $4 \times 10 - 7 = 33$ (Y) · $6 \times 5 - 8 = 22$ (B) · $65 + 7 \times 2 = 79$ (W) · $1 + 3 \times 4 = 13$ (D) · $7 \times 3 - 9 = 12$ (T) · $8 \times 10 - 9 = 71$ (A) · $3 \times 10 - 5 = 25$ (S) · $8 \times 7 - 19 = 37$ (U) · $25 + 8 \times 3 = 49$ (R) · $2 + 2 \times 3 = 8$ (I)

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

$80 \div 8 = 10$ · $24 \div 3 = 8$ · $30 \div 6 = 5$ · $36 \div 9 = 4$ · $99 \div 9 = 11$ · $24 \div 8 = 3$ · $56 \div 8 = 7$ · $24 \div 2 = 12$ · $30 \div 5 = 6$ · $27 \div 3 = 9$ · $22 \div 11 = 2$