



The Great Aviary Heist

Grade 6 math · Addition, Multiplication, Percentages, Exponents, Division · Reading level grades 7-9

Detective: _____ Date: _____

Someone broke into the Whispering Palms Sanctuary and snatched the prize Golden Perch Trophy! Clues were left all over the flight canopy. Help the sanctuary detectives track down the culprit before they escape.

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 bird thief is _____

Possible suspects

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

NAME	TRICKS	GADGETS	WHISTLING HABIT	FEATHER COLOR	DISTRACTION
Sammy Chirp	bell ringing	treat dispenser	taps beak on right side	opal green feathers	fresh cucumber slice
Penny Talon	bell ringing	treat dispenser	taps beak on right side	sky blue feathers	fresh cucumber slice
Pippin Beakman	bell ringing	treat dispenser	taps beak on right side	opal green feathers	millet spray
Barnaby Quill	mirror tapping	treat dispenser	taps beak on left side	opal green feathers	millet spray
Avery Cloud	perch acrobatics	laser pointer	taps beak on right side	sun yellow feathers	shiny bell
Peanut Perch	perch acrobatics	misting bottle	taps beak on left side	sky blue feathers	millet spray
Cleo Feather	seed sorting	laser pointer	taps beak on left side	sky blue feathers	shiny bell
Biscotti Bird	whistle mimicry	misting bottle	taps beak on right side	sun yellow feathers	shiny bell
Mango Gold	seed sorting	laser pointer	taps beak on left side	opal green feathers	fresh cucumber slice
Felix Plume	bell ringing	clicker trainer	taps beak on right side	opal green feathers	fresh cucumber slice
Maya Skyward	seed sorting	laser pointer	taps beak on right side	sun yellow feathers	fresh cucumber slice
Ziggy Crest	whistle mimicry	feather duster	taps beak on right side	opal green feathers	shiny bell
Pip Skylark	perch acrobatics	clicker trainer	taps beak on left side	sun yellow feathers	fresh cucumber slice
Kiwi Featherstone	whistle mimicry	misting bottle	taps beak on right side	sky blue feathers	millet spray
Toby Canopy	seed sorting	misting bottle	taps beak on right side	opal green feathers	fresh cucumber slice
Chirpy McFly	perch acrobatics	feather duster	taps beak on right side	opal green feathers	fresh cucumber slice
Oliver Swoop	bell ringing	clicker trainer	taps beak on left side	sun yellow feathers	millet spray
Tweety Sterling	perch acrobatics	laser pointer	taps beak on right side	sky blue feathers	millet spray
Jasper Downy	whistle mimicry	clicker trainer	taps beak on left side	opal green feathers	fresh cucumber slice
Sky Flutter	seed sorting	treat dispenser	taps beak on left side	opal green feathers	fresh cucumber slice
Sora Wingford	seed sorting	laser pointer	taps beak on right side	opal green feathers	fresh cucumber slice

CLUE 1 Addition

To calculate total seed inventory at the sanctuary, add up the seed deliveries from each truck.

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

T

 T

5463 9572 7888
 3761 2976 7888 5118 5999 5539
 5463 9572 9332 7888 6616
 9397 9332 9397

T

 T

2976 9736 5463
 6132 3761 7888
 5118
 7769 9332 3761 5463 9332 2976 9610

T T

8614 9736 5463 5463 9363 7888

$2314 + 3149 = \boxed{} \rightarrow \boxed{\text{T}}$

$3059 + 4710 = \boxed{} \rightarrow \boxed{\text{M}}$

$3165 + 2967 = \boxed{} \rightarrow \boxed{\text{U}}$

$2245 + 1516 = \boxed{} \rightarrow \boxed{\text{S}}$

$1728 + 1248 = \boxed{} \rightarrow \boxed{\text{N}}$

$5972 + 3600 = \boxed{} \rightarrow \boxed{\text{H}}$

$3287 + 2252 = \boxed{} \rightarrow \boxed{\text{Y}}$

$3128 + 3488 = \boxed{} \rightarrow \boxed{\text{F}}$

$2996 + 5618 = \boxed{} \rightarrow \boxed{\text{B}}$

$2941 + 2177 = \boxed{} \rightarrow \boxed{\text{A}}$

$5687 + 3645 = \boxed{} \rightarrow \boxed{\text{I}}$

$3718 + 6018 = \boxed{} \rightarrow \boxed{\text{O}}$

$3538 + 5859 = \boxed{} \rightarrow \boxed{\text{D}}$

$5158 + 2730 = \boxed{} \rightarrow \boxed{\text{E}}$

$5321 + 4042 = \boxed{} \rightarrow \boxed{\text{L}}$

$4924 + 4686 = \boxed{} \rightarrow \boxed{\text{G}}$

$2721 + 3278 = \boxed{} \rightarrow \boxed{\text{K}}$

Scratch space:

CLUE 2
Multiplication facts (1-12)

The sanctuary arranges flight perches in uniform rows, so multiply the perches per row by the number of rows.

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

T									T	T					T				
9	2	90	48	66	48	20	90	108	9	9	63	20	48	9	2	90	42	49	

						T						T					
96	90	63	27	121	81	9	2	90	49	42	110	2	9	48	42	7	90

$3 \times 3 = \square \rightarrow \text{[T]}$

$1 \times 2 = \square \rightarrow \text{[H]}$

$7 \times 7 = \square \rightarrow \text{[R]}$

$9 \times 7 = \square \rightarrow \text{[A]}$

$7 \times 1 = \square \rightarrow \text{[D]}$

$11 \times 10 = \square \rightarrow \text{[G]}$

$6 \times 7 = \square \rightarrow \text{[I]}$

$12 \times 9 = \square \rightarrow \text{[C]}$

$10 \times 2 = \square \rightarrow \text{[P]}$

$9 \times 9 = \square \rightarrow \text{[N]}$

$9 \times 10 = \square \rightarrow \text{[E]}$

$8 \times 12 = \square \rightarrow \text{[B]}$

$11 \times 6 = \square \rightarrow \text{[U]}$

$11 \times 11 = \square \rightarrow \text{[O]}$

$12 \times 4 = \square \rightarrow \text{[S]}$

$3 \times 9 = \square \rightarrow \text{[K]}$

Scratch space:

CLUE 3 Percentages

A key logbook entry tracks the exact percentage of rare blue budgies rescued this month.

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

A																		
13	17	5	36	26	12	21	7	21	7	30	14	36	5	26	41	18	21	36
39	5	18	32	32	36	43	7	32	39	12	36	39	12	18	36	17		

$20\% \text{ of } 65 = \boxed{} \rightarrow \boxed{\text{A}}$

$25\% \text{ of } 172 = \boxed{} \rightarrow \boxed{\text{D}}$

$10\% \text{ of } 120 = \boxed{} \rightarrow \boxed{\text{H}}$

$50\% \text{ of } 42 = \boxed{} \rightarrow \boxed{\text{C}}$

$10\% \text{ of } 360 = \boxed{} \rightarrow \boxed{\text{E}}$

$20\% \text{ of } 90 = \boxed{} \rightarrow \boxed{\text{I}}$

$40\% \text{ of } 35 = \boxed{} \rightarrow \boxed{\text{B}}$

$5\% \text{ of } 100 = \boxed{} \rightarrow \boxed{\text{R}}$

$10\% \text{ of } 320 = \boxed{} \rightarrow \boxed{\text{P}}$

$50\% \text{ of } 34 = \boxed{} \rightarrow \boxed{\text{F}}$

$10\% \text{ of } 300 = \boxed{} \rightarrow \boxed{\text{M}}$

$10\% \text{ of } 260 = \boxed{} \rightarrow \boxed{\text{S}}$

$20\% \text{ of } 205 = \boxed{} \rightarrow \boxed{\text{L}}$

$20\% \text{ of } 35 = \boxed{} \rightarrow \boxed{\text{U}}$

$75\% \text{ of } 52 = \boxed{} \rightarrow \boxed{\text{T}}$

Scratch space:

CLUE 4 Exponents

Budgie populations in the breeding program double exponentially each season under optimal habitat care.

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

L								L					
361	216	216	169	27	216	100	4	361	36	9	27	27	324

121	27	4	243	32	27	9	169	289	27	9	27	64	9	216	100	100	27	64

$19^2 = \square \rightarrow \text{L}$	$2^2 = \square \rightarrow \text{A}$	$10^2 = \square \rightarrow \text{P}$	$6^2 = \square \rightarrow \text{G}$
$2^5 = \square \rightarrow \text{H}$	$3^2 = \square \rightarrow \text{R}$	$17^2 = \square \rightarrow \text{W}$	$13^2 = \square \rightarrow \text{S}$
$3^5 = \square \rightarrow \text{T}$	$3^3 = \square \rightarrow \text{E}$	$18^2 = \square \rightarrow \text{N}$	$4^3 = \square \rightarrow \text{D}$
$6^3 = \square \rightarrow \text{O}$	$11^2 = \square \rightarrow \text{F}$		

Scratch space:

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

To distribute fresh millet sprays equally among all aviary cages, divide the total harvest evenly.

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:

$16 \div 4 = \boxed{}$

$121 \div 11 = \boxed{}$

$12 \div 2 = \boxed{}$

$8 \div 1 = \boxed{}$

$4 \div 4 = \boxed{}$

$99 \div 11 = \boxed{}$

$77 \div 11 = \boxed{}$

$3 \div 1 = \boxed{}$

$25 \div 5 = \boxed{}$

$80 \div 8 = \boxed{}$

$8 \div 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain mimicked the warning whistle, then jammed the treat dispenser.
2. The villain sorted through the millet seeds, then jammed the treat dispenser.
3. The villain swung across the perches, then jammed the treat dispenser.
4. The villain swung across the perches, then waved the feather duster.
5. The villain swung across the perches, then sprayed the misting bottle.
6. The villain rang the tiny brass bell, then jammed the treat dispenser.
7. The villain tapped on the hanging mirror, then jammed the treat dispenser.
8. The villain mimicked the warning whistle, then sprayed the misting bottle.
9. The villain rang the tiny brass bell, then waved the feather duster.
10. The villain rang the tiny brass bell, then sprayed the misting bottle.
11. The villain rang the tiny brass bell, then clicked the trainer button.
12. The villain sorted through the millet seeds, then shoved the laser pointer aside.

Answer Key

The Great Aviary Heist

Culprit: Sora Wingford

seed sorting · laser pointer · taps beak on right side · opal green feathers · fresh cucumber slice

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SNEAKY THIEF DID NOT USE A MISTING BOTTLE"

$2314 + 3149 = 5463$ (T) · $3059 + 4710 = 7769$ (M) · $3165 + 2967 = 6132$ (U) · $2245 + 1516 = 3761$ (S) · $1728 + 1248 = 2976$ (N) · $5972 + 3600 = 9572$ (H) · $3287 + 2252 = 5539$ (Y) · $3128 + 3488 = 6616$ (F) · $2996 + 5618 = 8614$ (B) · $2941 + 2177 = 5118$ (A) · $5687 + 3645 = 9332$ (I) · $3718 + 6018 = 9736$ (O) · $3538 + 5859 = 9397$ (D) · $5158 + 2730 = 7888$ (E) · $5321 + 4042 = 9363$ (L) · $4924 + 4686 = 9610$ (G) · $2721 + 3278 = 5999$ (K)

Clue 2 (Multiplication facts (1-12)): "THE SUSPECT TAPS THEIR BEAK ON THE RIGHT SIDE"

$3 \times 3 = 9$ (T) · $1 \times 2 = 2$ (H) · $7 \times 7 = 49$ (R) · $9 \times 7 = 63$ (A) · $7 \times 1 = 7$ (D) · $11 \times 10 = 110$ (G) · $6 \times 7 = 42$ (I) · $12 \times 9 = 108$ (C) · $10 \times 2 = 20$ (P) · $9 \times 9 = 81$ (N) · $9 \times 10 = 90$ (E) · $8 \times 12 = 96$ (B) · $11 \times 6 = 66$ (U) · $11 \times 11 = 121$ (O) · $12 \times 4 = 48$ (S) · $3 \times 9 = 27$ (K)

Clue 3 (Percentages): "A FRESH CUCUMBER SLICE TRIPPED UP THE THIEF"

20% of 65 = 13 (A) · 25% of 172 = 43 (D) · 10% of 120 = 12 (H) · 50% of 42 = 21 (C) · 10% of 360 = 36 (E) · 20% of 90 = 18 (I) · 40% of 35 = 14 (B) · 5% of 100 = 5 (R) · 10% of 320 = 32 (P) · 50% of 34 = 17 (F) · 10% of 300 = 30 (M) · 10% of 260 = 26 (S) · 20% of 205 = 41 (L) · 20% of 35 = 7 (U) · 75% of 52 = 39 (T)

Clue 4 (Exponents): "LOOSE OPAL GREEN FEATHERS WERE DROPPED"

$19^{\wedge}2 = 361$ (L) · $2^{\wedge}2 = 4$ (A) · $10^{\wedge}2 = 100$ (P) · $6^{\wedge}2 = 36$ (G) · $2^{\wedge}5 = 32$ (H) · $3^{\wedge}2 = 9$ (R) · $17^{\wedge}2 = 289$ (W) · $13^{\wedge}2 = 169$ (S) · $3^{\wedge}5 = 243$ (T) · $3^{\wedge}3 = 27$ (E) · $18^{\wedge}2 = 324$ (N) · $4^{\wedge}3 = 64$ (D) · $6^{\wedge}3 = 216$ (O) · $11^{\wedge}2 = 121$ (F)

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

$16 \div 4 = 4$ · $121 \div 11 = 11$ · $12 \div 2 = 6$ · $8 \div 1 = 8$ · $4 \div 4 = 1$ · $99 \div 11 = 9$ · $77 \div 11 = 7$ · $3 \div 1 = 3$ · $25 \div 5 = 5$ · $80 \div 8 = 10$ · $8 \div 4 = 2$