



The Great Catnip Trophy Caper

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Disaster has struck the Meow Palace! The legendary Golden Catnip Trophy has vanished from the display stage. The Head Judge is shedding fur from worry. One of the famous show cats is secretly a sneaky thief. We must track the pawprints, solve the clues, and retrieve the trophy!

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 cat burglar is _____

Possible suspects

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

NAME	FAVORITE TOY	SUPER SKILL	STEALTH STYLE	FUR PATTERN	DISTRACTION
Garfield	Catnip Mouse	Loud Meow	Right Pawed	Solid Orange	Open Box
Oliver	Catnip Mouse	Loud Meow	Right Pawed	Solid Orange	Can Opener Sound
Berlioz	Laser Pointer	Silent Sneak	Left Pawed	Tabby Stripes	Open Box
Felix	Squeaky Toy	High Jumps	Right Pawed	Calico Patches	Crinkly Paper
Marie	Laser Pointer	Silent Sneak	Right Pawed	Solid Orange	Open Box
Pusheen	Feather Wand	Silent Sneak	Right Pawed	Solid Orange	Open Box
Socks	Laser Pointer	Fast Dash	Right Pawed	Calico Patches	Open Box
Lil Bub	Catnip Mouse	Loud Meow	Left Pawed	Solid Orange	Open Box
Simon	Laser Pointer	Loud Meow	Right Pawed	Calico Patches	Crinkly Paper
Sylvester	Squeaky Toy	High Jumps	Right Pawed	Solid Orange	Open Box
Hobbes	Laser Pointer	Fast Dash	Right Pawed	Tabby Stripes	Crinkly Paper
Duchess	Laser Pointer	Fast Dash	Left Pawed	Solid Orange	Crinkly Paper
Salem	Feather Wand	Fast Dash	Right Pawed	Calico Patches	Crinkly Paper
Bob	Laser Pointer	Fast Dash	Right Pawed	Tabby Stripes	Open Box
Snowball	Feather Wand	Loud Meow	Right Pawed	Solid Orange	Open Box
Grumpy Cat	Laser Pointer	Super Purr	Left Pawed	Solid Orange	Crinkly Paper
Rajah	Yarn Ball	High Jumps	Right Pawed	Solid Orange	Open Box
Nyan Cat	Catnip Mouse	Silent Sneak	Left Pawed	Calico Patches	Open Box
Tom	Feather Wand	High Jumps	Right Pawed	Calico Patches	Crinkly Paper
Chi	Yarn Ball	Super Purr	Right Pawed	Solid Orange	Can Opener Sound
Keyboard Cat	Catnip Mouse	Super Purr	Right Pawed	Tabby Stripes	Crinkly Paper

CLUE 1 Percentages

The guard found a dropped phone near the empty trophy case. The glowing screen displays a percentage of battery power left.

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

A 2x12 grid of boxes. The top row contains the following sequence: an orange box with 'T', three empty boxes, an orange box with 'T', and nine empty boxes. The bottom row contains the following sequence: three empty boxes, an orange box with 'T', and nine empty boxes. Below each box is a number. The top row numbers are: 38, 11, 33, 31, 5, 22, 7, 16, 18, 22, 43, 1, 33, 23, 26, 1, 38. The bottom row numbers are: 5, 23, 33, 23, 6, 16, 33, 26, 38, 23, 26, 33, 18, 8.

T																T
38	11	33														38
5	23	33	23	6	16	33	26	38	23	26	33	18	8			

40% of 95 = $\rightarrow$ **T**

5% of 160 = $\rightarrow$ **K**

50% of 66 = → **E**

10% of 260 = $\rightarrow$ **N**

5% of 20 = → **0**

10% of 160 = $\rightarrow$ **L**

10% of 430 = → **D**

$$50\% \text{ of } 22 = \boxed{} \rightarrow \boxed{\text{H}}$$

5% of 100 = → **U**

20% of 115 = → **S**

$$10\% \text{ of } 60 = \boxed{} \rightarrow \boxed{\text{I}}$$

20% of 155 = → **B**

10% of 180 = $\rightarrow$ **A**

40% of 55 = → **R**

20% of 35 = → **G**

Scratch space:

CLUE 2 Exponents

The suspect ran through the kitchen and turned on a fancy treat dispenser. The treats are doubling with every button push.

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

T			T														
121	8	169	121	8	16	169	64	27	243	49	169	243	196	4	16	225	169

		T		T							T			
4	16	121	8	121	8	169	144	16	361	8	121	225	243	4

$11^2 = \square \rightarrow \text{T}$	$3^3 = \square \rightarrow \text{M}$	$15^2 = \square \rightarrow \text{P}$	$2^6 = \square \rightarrow \text{F}$
$19^2 = \square \rightarrow \text{G}$	$4^2 = \square \rightarrow \text{I}$	$3^5 = \square \rightarrow \text{A}$	$13^2 = \square \rightarrow \text{E}$
$7^2 = \square \rightarrow \text{D}$	$12^2 = \square \rightarrow \text{R}$	$2^3 = \square \rightarrow \text{H}$	$2^2 = \square \rightarrow \text{W}$
$14^2 = \square \rightarrow \text{S}$			

Scratch space:

CLUE 3
Order of operations

We found a locked diary belonging to the thief. We must solve the code in the exact order of operations to open the lock.

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

T 26	16	24	27	56	49	65	56	T 26	78	T 26	71	44	44	24	49	T 26	71
78	46	T 26	46	19	56	19	71	44	24	19	27	71	34				

$18 + 2 \times 4 = \square \rightarrow \text{[T]}$

$3 \times 11 - 6 = \square \rightarrow \text{[B]}$

$14 + 4 \times 5 = \square \rightarrow \text{[X]}$

$11 \times 6 - 1 = \square \rightarrow \text{[C]}$

$6 \times 3 - 2 = \square \rightarrow \text{[H]}$

$4 + 9 \times 5 = \square \rightarrow \text{[D]}$

$7 \times 7 - 3 = \square \rightarrow \text{[I]}$

$10 \times 10 - 22 = \square \rightarrow \text{[S]}$

$35 + 9 \times 4 = \square \rightarrow \text{[O]}$

$4 + 5 \times 3 = \square \rightarrow \text{[N]}$

$10 + 7 \times 2 = \square \rightarrow \text{[E]}$

$11 \times 6 - 10 = \square \rightarrow \text{[A]}$

$26 + 3 \times 6 = \square \rightarrow \text{[P]}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

To find the next clue, we must count the rows of shiny bell collars lined up on the judge's table.

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

W																
90	55	100	110	22	25	77	16	44	80	36	15	121	100	22	44	
121	15	45	121	80	70	70	110	30	80	77	110	44	45	25	36	55

$10 \times 9 = \square \rightarrow \boxed{\text{W}}$

$4 \times 4 = \square \rightarrow \boxed{\text{B}}$

$12 \times 3 = \square \rightarrow \boxed{\text{G}}$

$11 \times 11 = \square \rightarrow \boxed{\text{T}}$

$4 \times 11 = \square \rightarrow \boxed{\text{R}}$

$7 \times 10 = \square \rightarrow \boxed{\text{S}}$

$10 \times 10 = \square \rightarrow \boxed{\text{F}}$

$11 \times 7 = \square \rightarrow \boxed{\text{D}}$

$10 \times 11 = \square \rightarrow \boxed{\text{O}}$

$5 \times 3 = \square \rightarrow \boxed{\text{H}}$

$10 \times 8 = \square \rightarrow \boxed{\text{I}}$

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

$5 \times 9 = \square \rightarrow \boxed{\text{A}}$

$3 \times 10 = \square \rightarrow \boxed{\text{L}}$

$5 \times 11 = \square \rightarrow \boxed{\text{E}}$

$11 \times 2 = \square \rightarrow \boxed{\text{U}}$

Scratch space:

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

The local alley kittens will tell us what they saw if we split these fish biscuits equally among them.

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:

$132 \div 12 = \boxed{}$

$88 \div 11 = \boxed{}$

$90 \div 10 = \boxed{}$

$60 \div 10 = \boxed{}$

$12 \div 6 = \boxed{}$

$27 \div 9 = \boxed{}$

$84 \div 12 = \boxed{}$

$15 \div 3 = \boxed{}$

$30 \div 3 = \boxed{}$

$24 \div 2 = \boxed{}$

$5 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain pounces on the squeaky toy, then escapes with a fast dash.
2. The villain rolls the yarn ball, then escapes with a fast dash.
3. The villain chases the laser pointer, then escapes with a fast dash.
4. The villain rolls the yarn ball, then shows off some high jumps.
5. The villain rolls the yarn ball, then rumbles with a super purr.
6. The villain swipes the feather wand, then shows off some high jumps.
7. The villain tosses the catnip mouse, then escapes with a fast dash.
8. The villain swipes the feather wand, then distracts the guards with a loud meow.
9. The villain pounces on the squeaky toy, then shows off some high jumps.
10. The villain pounces on the squeaky toy, then distracts the guards with a loud meow.
11. The villain tosses the catnip mouse, then distracts the guards with a loud meow.
12. The villain tosses the catnip mouse, then rumbles with a super purr.

Answer Key

The Great Catnip Trophy Caper

Culprit: Rajah

Yarn Ball · High Jumps · Right Pawed · Solid Orange · Open Box

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE BURGLAR DOES NOT USE SILENT SNEAK"

40% of 95 = 38 (T) · 5% of 160 = 8 (K) · 50% of 66 = 33 (E) · 10% of 260 = 26 (N) · 5% of 20 = 1 (O) · 10% of 160 = 16 (L) · 10% of 430 = 43 (D) · 50% of 22 = 11 (H) · 5% of 100 = 5 (U) · 20% of 115 = 23 (S) · 10% of 60 = 6 (I) · 20% of 155 = 31 (B) · 10% of 180 = 18 (A) · 40% of 55 = 22 (R) · 20% of 35 = 7 (G)

Clue 2 (Exponents): "THE THIEF MADE A SWIPE WITH THE RIGHT PAW"

$11^2 = 121$ (T) · $3^3 = 27$ (M) · $15^2 = 225$ (P) · $2^6 = 64$ (F) · $19^2 = 361$ (G) · $4^2 = 16$ (I) · $3^5 = 243$ (A) · $13^2 = 169$ (E) · $7^2 = 49$ (D) · $12^2 = 144$ (R) · $2^3 = 8$ (H) · $2^2 = 4$ (W) · $14^2 = 196$ (S)

Clue 3 (Order of operations): "THE BAD CAT STOPPED TO SIT IN AN OPEN BOX"

$18 + 2 \times 4 = 26$ (T) · $3 \times 11 - 6 = 27$ (B) · $14 + 4 \times 5 = 34$ (X) · $11 \times 6 - 1 = 65$ (C) · $6 \times 3 - 2 = 16$ (H) · $4 + 9 \times 5 = 49$ (D) · $7 \times 7 - 3 = 46$ (I) · $10 \times 10 - 22 = 78$ (S) · $35 + 9 \times 4 = 71$ (O) · $4 + 5 \times 3 = 19$ (N) · $10 + 7 \times 2 = 24$ (E) · $11 \times 6 - 10 = 56$ (A) · $26 + 3 \times 6 = 44$ (P)

Clue 4 (Multiplication facts (1-12)): "WE FOUND BRIGHT FUR THAT IS SOLID ORANGE"

$10 \times 9 = 90$ (W) · $4 \times 4 = 16$ (B) · $12 \times 3 = 36$ (G) · $11 \times 11 = 121$ (T) · $4 \times 11 = 44$ (R) · $7 \times 10 = 70$ (S) · $10 \times 10 = 100$ (F) · $11 \times 7 = 77$ (D) · $10 \times 11 = 110$ (O) · $5 \times 3 = 15$ (H) · $10 \times 8 = 80$ (I) · $5 \times 5 = 25$ (N) · $5 \times 9 = 45$ (A) · $3 \times 10 = 30$ (L) · $5 \times 11 = 55$ (E) · $11 \times 2 = 22$ (U)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Rajah

$132 \div 12 = 11$ · $88 \div 11 = 8$ · $90 \div 10 = 9$ · $60 \div 10 = 6$ · $12 \div 6 = 2$ · $27 \div 9 = 3$ · $84 \div 12 = 7$ · $15 \div 3 = 5$ · $30 \div 3 = 10$ · $24 \div 2 = 12$ · $5 \div 5 = 1$