



The Case of the Missing Golden Mouse

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 5-6

Detective: _____ Date: _____

Someone snatched the Grand Champion Golden Mouse Trophy right off the judging table during the annual feline festival! Detective Whiskers needs your math skills to decode the clues and catch the sneaky culprit.

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	SPECIALTY	ACCESSORY	PAW PREFERENCE	FUR PATTERN	DISTRACTION
Simba	Catnip Crafting	Feather Wand	Left Pawed	Calico Stripes	Tuna Treats
Cleo	Yarn Untangling	Squeaky Toy	Left Pawed	Calico Stripes	Tuna Treats
Milo	Silent Stalking	Silver Bell Collar	Right Pawed	Calico Stripes	Tuna Treats
Hazel	Yarn Untangling	Silver Bell Collar	Right Pawed	Siamese Point	Tuna Treats
Zelda	High Jumping	Squeaky Toy	Right Pawed	Calico Stripes	Warm Sunbeams
Peanut	High Jumping	Squeaky Toy	Right Pawed	Tuxedo Black	Squeaky Mice
Shadow	Silent Stalking	Squeaky Toy	Left Pawed	Tuxedo Black	Warm Sunbeams
Oliver	High Jumping	Squeaky Toy	Right Pawed	Tuxedo Black	Warm Sunbeams
Nala	Yarn Untangling	Silver Bell Collar	Right Pawed	Tuxedo Black	Squeaky Mice
Daisy	Laser Chasing	Silver Bell Collar	Left Pawed	Siamese Point	Tuna Treats
Bella	Yarn Untangling	Feather Wand	Left Pawed	Calico Stripes	Tuna Treats
Jasper	High Jumping	Silver Bell Collar	Left Pawed	Calico Stripes	Tuna Treats
Chester	Catnip Crafting	Gemmed Harness	Left Pawed	Siamese Point	Tuna Treats
Felix	Silent Stalking	Velvet Bowtie	Right Pawed	Siamese Point	Warm Sunbeams
Duchess	Catnip Crafting	Feather Wand	Left Pawed	Calico Stripes	Squeaky Mice
Barnaby	Yarn Untangling	Silver Bell Collar	Right Pawed	Calico Stripes	Tuna Treats
Gizmo	Yarn Untangling	Velvet Bowtie	Left Pawed	Siamese Point	Warm Sunbeams
Whiskers	Yarn Untangling	Silver Bell Collar	Left Pawed	Calico Stripes	Tuna Treats
Iggy	Laser Chasing	Squeaky Toy	Left Pawed	Calico Stripes	Tuna Treats
Smokey	Silent Stalking	Velvet Bowtie	Right Pawed	Tuxedo Black	Tuna Treats
Mittens	Silent Stalking	Silver Bell Collar	Right Pawed	Tuxedo Black	Squeaky Mice

CLUE 1 Percentages

The security team surveyed the grand hall and calculated the percentage of paw prints left near the empty display.

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

T																	T
29	38	5	2	18	7	7	8	18	25	43	30	5	3	25	30	29	
35	8	4	4	14	8	3	32	33	5	8	44	14	T				

$$5\% \text{ of } 580 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$25\% \text{ of } 176 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$20\% \text{ of } 175 = \boxed{} \rightarrow \boxed{\text{C}}$$

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

$$20\% \text{ of } 160 = \boxed{} \rightarrow \boxed{\text{Q}}$$

$$25\% \text{ of } 100 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$60\% \text{ of } 55 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$50\% \text{ of } 10 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$40\% \text{ of } 5 = \boxed{} \rightarrow \boxed{\text{V}}$$

$$5\% \text{ of } 860 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$40\% \text{ of } 95 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$50\% \text{ of } 14 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$5\% \text{ of } 80 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$25\% \text{ of } 72 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$75\% \text{ of } 4 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$20\% \text{ of } 40 = \boxed{} \rightarrow \boxed{\text{A}}$$

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

Scratch space:

CLUE 2

Exponents

A digital fur scanner powered up expanding its beam in exponential steps across the arena floor.

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

W												W					
324	49	32	36	400	16	16	400	16	16	100	324	100	4	400	27	32	

		W									
9	100	324	400	196	27	400	4	49	36	400	

$18^2 = \square \rightarrow \boxed{W}$

$4^2 = \square \rightarrow \boxed{S}$

$14^2 = \square \rightarrow \boxed{D}$

$20^2 = \square \rightarrow \boxed{E}$

$7^2 = \square \rightarrow \boxed{I}$

$2^5 = \square \rightarrow \boxed{T}$

$6^2 = \square \rightarrow \boxed{N}$

$10^2 = \square \rightarrow \boxed{A}$

$3^3 = \square \rightarrow \boxed{F}$

$2^2 = \square \rightarrow \boxed{L}$

$3^2 = \square \rightarrow \boxed{P}$

Scratch space:

CLUE 3
Order of operations

Detective Whiskers followed a complex multistep list of instructions to unlock the hidden diary.

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

T											
55	75	31	16	10	23	23	17	18	9	61	

			T				T								
7	27	61	55	10	9	16	55	31	7	50	32	55	8	51	9

T				T	
55	10	31	9	55	61

$25 + 6 \times 5 = \square \rightarrow \boxed{\text{T}}$

$53 + 2 \times 4 = \square \rightarrow \boxed{\text{S}}$

$17 + 2 \times 5 = \square \rightarrow \boxed{\text{I}}$

$2 \times 12 - 1 = \square \rightarrow \boxed{\text{O}}$

$5 \times 10 - 19 = \square \rightarrow \boxed{\text{E}}$

$8 + 3 \times 3 = \square \rightarrow \boxed{\text{K}}$

$6 \times 11 - 15 = \square \rightarrow \boxed{\text{N}}$

$10 \times 3 - 12 = \square \rightarrow \boxed{\text{W}}$

$19 + 8 \times 7 = \square \rightarrow \boxed{\text{H}}$

$1 + 4 \times 2 = \square \rightarrow \boxed{\text{A}}$

$26 + 3 \times 2 = \square \rightarrow \boxed{\text{Y}}$

$3 \times 5 - 7 = \square \rightarrow \boxed{\text{U}}$

$6 + 2 \times 2 = \square \rightarrow \boxed{\text{R}}$

$6 \times 10 - 10 = \square \rightarrow \boxed{\text{B}}$

$1 + 2 \times 3 = \square \rightarrow \boxed{\text{D}}$

$3 \times 12 - 20 = \square \rightarrow \boxed{\text{C}}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

The judging committee counted equal rows of scratch marks found along the wooden stage.

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

F			F														
50	45	54	50	30	45	2	20	3	5	110	36	16	2	16	22	3	110

36	3	32	90	36	30	110	5	54	90	35	16	110

$5 \times 10 = \square \rightarrow \text{F}$

$9 \times 10 = \square \rightarrow \text{I}$

$10 \times 2 = \square \rightarrow \text{D}$

$7 \times 5 = \square \rightarrow \text{P}$

$9 \times 4 = \square \rightarrow \text{C}$

$3 \times 1 = \square \rightarrow \text{A}$

$9 \times 6 = \square \rightarrow \text{R}$

$10 \times 11 = \square \rightarrow \text{S}$

$8 \times 4 = \square \rightarrow \text{L}$

$11 \times 2 = \square \rightarrow \text{H}$

$3 \times 10 = \square \rightarrow \text{O}$

$5 \times 1 = \square \rightarrow \text{T}$

$4 \times 4 = \square \rightarrow \text{E}$

$2 \times 1 = \square \rightarrow \text{N}$

$9 \times 5 = \square \rightarrow \text{U}$

Scratch space:

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

The reward treats were split evenly among the witness kittens to gather final statements.

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:

$9 \div 3 = \boxed{}$

$72 \div 6 = \boxed{}$

$96 \div 12 = \boxed{}$

$16 \div 8 = \boxed{}$

$42 \div 7 = \boxed{}$

$10 \div 2 = \boxed{}$

$84 \div 12 = \boxed{}$

$11 \div 1 = \boxed{}$

$4 \div 1 = \boxed{}$

$63 \div 7 = \boxed{}$

$100 \div 10 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain crawled inside the air duct, then waved a shiny feather wand.
2. The villain crawled inside the air duct, then adjusted a neat velvet bowtie.
3. The villain crawled inside the air duct, then jingled a silver bell collar.
4. The villain snapped the glass case lock, then squeaked a toy mouse loudly.
5. The villain sneaked past the security guard, then jingled a silver bell collar.
6. The villain pounced across the display table, then flashed a glittery gemmed harness.
7. The villain snapped the glass case lock, then waved a shiny feather wand.
8. The villain sneaked past the security guard, then waved a shiny feather wand.
9. The villain leaped through the high window, then jingled a silver bell collar.
10. The villain leaped through the high window, then flashed a glittery gemmed harness.
11. The villain crawled inside the air duct, then flashed a glittery gemmed harness.
12. The villain snapped the glass case lock, then jingled a silver bell collar.

Answer Key

The Case of the Missing Golden Mouse

Culprit: Bella

Yarn Untangling · Feather Wand · Left Pawed · Calico Stripes · Tuna Treats

Trail: Start 21 → Clue 1 15 → Clue 2 8 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE VILLAIN DOES NOT CARRY A SQUEAKY TOY"

5% of 580 = 29 (T) · 25% of 176 = 44 (K) · 20% of 175 = 35 (C) · 40% of 35 = 14 (Y) · 20% of 160 = 32 (Q) · 25% of 100 = 25 (N) · 60% of 55 = 33 (U) · 50% of 10 = 5 (E) · 40% of 5 = 2 (V) · 5% of 860 = 43 (D) · 40% of 95 = 38 (H) · 50% of 14 = 7 (L) · 5% of 80 = 4 (R) · 25% of 72 = 18 (I) · 75% of 4 = 3 (S) · 20% of 40 = 8 (A) · 10% of 300 = 30 (O)

Clue 2 (Exponents): "WITNESSES SAW A LEFT PAWED FELINE"

$18^2 = 324$ (W) · $4^2 = 16$ (S) · $14^2 = 196$ (D) · $20^2 = 400$ (E) · $7^2 = 49$ (I) · $2^5 = 32$ (T) · $6^2 = 36$ (N) · $10^2 = 100$ (A) · $3^3 = 27$ (F) · $2^2 = 4$ (L) · $3^2 = 9$ (P)

Clue 3 (Order of operations): "THE CROOK WAS DISTRACTED BY TUNA TREATS"

$25 + 6 \times 5 = 55$ (T) · $53 + 2 \times 4 = 61$ (S) · $17 + 2 \times 5 = 27$ (I) · $2 \times 12 - 1 = 23$ (O) · $5 \times 10 - 19 = 31$ (E) · $8 + 3 \times 3 = 17$ (K) · $6 \times 11 - 15 = 51$ (N) · $10 \times 3 - 12 = 18$ (W) · $19 + 8 \times 7 = 75$ (H) · $1 + 4 \times 2 = 9$ (A) · $26 + 3 \times 2 = 32$ (Y) · $3 \times 5 - 7 = 8$ (U) · $6 + 2 \times 2 = 10$ (R) · $6 \times 10 - 10 = 50$ (B) · $1 + 2 \times 3 = 7$ (D) · $3 \times 12 - 20 = 16$ (C)

Clue 4 (Multiplication facts (1-12)): "FUR FOUND AT SCENE HAS CALICO STRIPES"

$5 \times 10 = 50$ (F) · $9 \times 10 = 90$ (I) · $10 \times 2 = 20$ (D) · $7 \times 5 = 35$ (P) · $9 \times 4 = 36$ (C) · $3 \times 1 = 3$ (A) · $9 \times 6 = 54$ (R) · $10 \times 11 = 110$ (S) · $8 \times 4 = 32$ (L) · $11 \times 2 = 22$ (H) · $3 \times 10 = 30$ (O) · $5 \times 1 = 5$ (T) · $4 \times 4 = 16$ (E) · $2 \times 1 = 2$ (N) · $9 \times 5 = 45$ (U)

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

$9 \div 3 = 3$ · $72 \div 6 = 12$ · $96 \div 12 = 8$ · $16 \div 8 = 2$ · $42 \div 7 = 6$ · $10 \div 2 = 5$ · $84 \div 12 = 7$ · $11 \div 1 = 11$ · $4 \div 1 = 4$ · $63 \div 7 = 9$ · $100 \div 10 = 10$