



The Case of the Golden Fish

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 1-2

Detective: _____ **Date:** _____

The Golden Fish trophy is gone! It was stolen from the Kitty Town Museum last night. The Museum Curator found paw prints near the empty glass case. We must help find the cat who took it!

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 stray 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	SUPER SKILL	SECRET GADGET	SCRATCHING PAW	FUR PATTERN	MAIN FEAR
Otis	Wall Climb	Catnip Spray	Left Pawed	Spotted Fur	Spray Bottle
Figaro	Wall Climb	Feather Wand	Right Pawed	Striped Fur	Loud Rustle
Milo	Super Jump	Yarn Launcher	Right Pawed	Spotted Fur	Loud Rustle
Mittens	Wall Climb	Feather Wand	Right Pawed	Striped Fur	Spray Bottle
Marie	Wall Climb	Feather Wand	Left Pawed	Spotted Fur	Spray Bottle
Felix	Silent Walk	Laser Pointer	Left Pawed	Striped Fur	Vacuum Cleaner
Jonesy	Super Jump	Catnip Spray	Left Pawed	Striped Fur	Spray Bottle
Berlioz	Night Vision	Yarn Launcher	Left Pawed	Spotted Fur	Spray Bottle
Luna	Silent Walk	Feather Wand	Right Pawed	Spotted Fur	Spray Bottle
Chloe	Mega Meow	Yarn Launcher	Right Pawed	Striped Fur	Loud Rustle
Nala	Mega Meow	Laser Pointer	Left Pawed	Striped Fur	Loud Rustle
Garfield	Mega Meow	Feather Wand	Left Pawed	Solid Fur	Vacuum Cleaner
Sylvester	Super Jump	Feather Wand	Left Pawed	Spotted Fur	Vacuum Cleaner
Bella	Night Vision	Laser Pointer	Right Pawed	Spotted Fur	Spray Bottle
Boots	Silent Walk	Yarn Launcher	Left Pawed	Spotted Fur	Spray Bottle
Crookshanks	Super Jump	Laser Pointer	Right Pawed	Spotted Fur	Vacuum Cleaner
Tom	Wall Climb	Squeak Toy	Left Pawed	Spotted Fur	Loud Rustle
Toulouse	Wall Climb	Feather Wand	Left Pawed	Striped Fur	Vacuum Cleaner
Duchess	Night Vision	Yarn Launcher	Left Pawed	Spotted Fur	Vacuum Cleaner
Whiskers	Super Jump	Laser Pointer	Left Pawed	Spotted Fur	Loud Rustle
Simba	Super Jump	Yarn Launcher	Left Pawed	Spotted Fur	Spray Bottle

CLUE 1 Percentages

We check the museum guard tablet. The battery screen shows how much power is left. We use a percentage to find the clue.

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

T																T
26	44	37	15	1	39	39	23	1	21	40	29	37	24	21	29	26
							T									
42	24	37	23	3	37	23	26	44	37	14	20	23	21	40		

$40\% \text{ of } 65 = \square \rightarrow \boxed{\text{T}}$

$5\% \text{ of } 840 = \square \rightarrow \boxed{\text{U}}$

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

$5\% \text{ of } 280 = \square \rightarrow \boxed{\text{R}}$

$25\% \text{ of } 96 = \square \rightarrow \boxed{\text{S}}$

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

$5\% \text{ of } 20 = \square \rightarrow \boxed{\text{I}}$

$5\% \text{ of } 800 = \square \rightarrow \boxed{\text{D}}$

$10\% \text{ of } 290 = \square \rightarrow \boxed{\text{O}}$

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

$10\% \text{ of } 440 = \square \rightarrow \boxed{\text{H}}$

$40\% \text{ of } 50 = \square \rightarrow \boxed{\text{W}}$

$5\% \text{ of } 740 = \square \rightarrow \boxed{\text{E}}$

$20\% \text{ of } 75 = \square \rightarrow \boxed{\text{V}}$

$50\% \text{ of } 46 = \square \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 2 Exponents

Next we look at a secret cat device. Its power level grows very fast like a math exponent. We calculate the power to unlock a note.

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

T																	
169	196	16	100	144	36	243	16	9	100	16	216	16	196	343	9		
							T							T			
64	216	8	400	8	16	125	169	81	343	32	81	144	36	216	169	9	

$13^2 = \square \rightarrow$ T	$14^2 = \square \rightarrow$ H	$4^3 = \square \rightarrow$ O	$9^2 = \square \rightarrow$ P
$6^2 = \square \rightarrow$ I	$2^3 = \square \rightarrow$ L	$2^5 = \square \rightarrow$ W	$2^4 = \square \rightarrow$ E
$20^2 = \square \rightarrow$ Y	$5^3 = \square \rightarrow$ F	$12^2 = \square \rightarrow$ R	$10^2 = \square \rightarrow$ C
$3^5 = \square \rightarrow$ M	$3^2 = \square \rightarrow$ S	$7^3 = \square \rightarrow$ A	$6^3 = \square \rightarrow$ N

Scratch space:

CLUE 3
Order of operations

We find a scrap of paper under a rug. It has a mix of plus and times signs that we must solve in the exact right order.

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

T			T															
49	51	14	49	51	11	14	67	34	10	6	10	23	10	7	67	34	78	29
										T	T							
10	60	63	34	10	7	58	78	49	49	77	14							

$6 \times 9 - 5 = \square \rightarrow \boxed{\text{T}}$

$16 + 6 \times 7 = \square \rightarrow \boxed{\text{B}}$

$58 + 4 \times 5 = \square \rightarrow \boxed{\text{O}}$

$5 + 2 \times 3 = \square \rightarrow \boxed{\text{I}}$

$11 + 8 \times 5 = \square \rightarrow \boxed{\text{H}}$

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

$12 \times 6 - 9 = \square \rightarrow \boxed{\text{P}}$

$22 + 4 \times 3 = \square \rightarrow \boxed{\text{R}}$

$8 \times 3 - 17 = \square \rightarrow \boxed{\text{Y}}$

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

$7 + 4 \times 4 = \square \rightarrow \boxed{\text{W}}$

$23 + 3 \times 2 = \square \rightarrow \boxed{\text{M}}$

$3 \times 5 - 1 = \square \rightarrow \boxed{\text{E}}$

$47 + 6 \times 5 = \square \rightarrow \boxed{\text{L}}$

$56 + 2 \times 2 = \square \rightarrow \boxed{\text{S}}$

$53 + 7 \times 2 = \square \rightarrow \boxed{\text{F}}$

Scratch space:

CLUE 4

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

Diagram illustrating the multiplication of 16 by 25 using the area model. The top row shows 16 boxes, and the bottom row shows 10 boxes. The boxes are labeled with numbers: 7, 2, 20, 60, 40, 48, 96, 3, 20, 60, 40, 77, 20, 3, 20, 25, 96, 40, 120, 20. The boxes with 'T' are the first box of the top row and the fourth and fifth boxes of the bottom row.

$7 \times 1 = \boxed{} \rightarrow \boxed{\text{T}}$

$1 \times 11 = \boxed{} \rightarrow \boxed{\text{F}}$

$12 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{S}}$

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

$8 \times 6 = \boxed{} \rightarrow \boxed{\text{P}}$

$12 \times 10 = \boxed{} \rightarrow \boxed{\text{M}}$

$$8 \times 5 = \boxed{} \rightarrow \boxed{0}$$

$$11 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$2 \times 1 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$3 \times 1 = \boxed{} \rightarrow \boxed{\mathbf{R}}$$

$$5 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{D}}$$

$$5 \times 4 = \boxed{} \rightarrow \boxed{\mathbf{E}}$$

$$10 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

Scratch space:

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

A group of stray kittens helped the thief. We divide up the stolen treats to see how many fish each kitten got.

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:

$108 \div 12 = \boxed{}$

$33 \div 11 = \boxed{}$

$12 \div 1 = \boxed{}$

$7 \div 1 = \boxed{}$

$8 \div 2 = \boxed{}$

$80 \div 10 = \boxed{}$

$40 \div 4 = \boxed{}$

$18 \div 9 = \boxed{}$

$48 \div 8 = \boxed{}$

$4 \div 4 = \boxed{}$

$22 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain scales the brick wall climb style, then shines a laser pointer to distract the guard.
2. The villain uses a super jump to reach the roof, then waves a feather wand to bypass the lasers.
3. The villain peers through the dark with night vision, then tangles the path with a yarn launcher.
4. The villain peers through the dark with night vision, then squeaks a squeak toy to lure the mice away.
5. The villain uses a super jump to reach the roof, then tangles the path with a yarn launcher.
6. The villain uses a super jump to reach the roof, then shines a laser pointer to distract the guard.
7. The villain shatters the glass with a mega meow, then shines a laser pointer to distract the guard.
8. The villain sneaks inside with a silent walk, then makes everyone sleepy with catnip spray.
9. The villain sneaks inside with a silent walk, then tangles the path with a yarn launcher.
10. The villain shatters the glass with a mega meow, then waves a feather wand to bypass the lasers.
11. The villain uses a super jump to reach the roof, then makes everyone sleepy with catnip spray.
12. The villain scales the brick wall climb style, then makes everyone sleepy with catnip spray.

Answer Key

The Case of the Golden Fish

Culprit: Simba

Super Jump · Yarn Launcher · Left Pawed · Spotted Fur · Spray Bottle

Trail: Start 21 → Clue 1 14 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE VILLAIN DOES NOT USE A FEATHER WAND"

40% of 65 = 26 (T) · 5% of 840 = 42 (U) · 75% of 52 = 39 (L) · 5% of 280 = 14 (R) · 25% of 96 = 24 (S) · 75% of 4 = 3 (F) · 5% of 20 = 1 (I) · 5% of 800 = 40 (D) · 10% of 290 = 29 (O) · 50% of 42 = 21 (N) · 10% of 440 = 44 (H) · 40% of 50 = 20 (W) · 5% of 740 = 37 (E) · 20% of 75 = 15 (V) · 50% of 46 = 23 (A)

Clue 2 (Exponents): "THE CRIME SCENE HAS ONLY LEFT PAW PRINTS"

$13^2 = 169$ (T) · $14^2 = 196$ (H) · $4^3 = 64$ (O) · $9^2 = 81$ (P) · $6^2 = 36$ (I) · $2^3 = 8$ (L) · $2^5 = 32$ (W) · $2^4 = 16$ (E) · $20^2 = 400$ (Y) · $5^3 = 125$ (F) · $12^2 = 144$ (R) · $10^2 = 100$ (C) · $3^5 = 243$ (M) · $3^2 = 9$ (S) · $7^3 = 343$ (A) · $6^3 = 216$ (N)

Clue 3 (Order of operations): "THE THIEF RAN AWAY FROM A SPRAY BOTTLE"

$6 \times 9 - 5 = 49$ (T) · $16 + 6 \times 7 = 58$ (B) · $58 + 4 \times 5 = 78$ (O) · $5 + 2 \times 3 = 11$ (I) · $11 + 8 \times 5 = 51$ (H) · $6 + 2 \times 2 = 10$ (A) · $12 \times 6 - 9 = 63$ (P) · $22 + 4 \times 3 = 34$ (R) · $8 \times 3 - 17 = 7$ (Y) · $2 + 2 \times 2 = 6$ (N) · $7 + 4 \times 4 = 23$ (W) · $23 + 3 \times 2 = 29$ (M) · $3 \times 5 - 1 = 14$ (E) · $47 + 6 \times 5 = 77$ (L) · $56 + 2 \times 2 = 60$ (S) · $53 + 7 \times 2 = 67$ (F)

Clue 4 (Multiplication facts (1-12)): "THE COPS RECOVERED SOME SPOTTED FUR"

$7 \times 1 = 7$ (T) · $1 \times 11 = 11$ (F) · $12 \times 8 = 96$ (S) · $12 \times 5 = 60$ (C) · $8 \times 6 = 48$ (P) · $12 \times 10 = 120$ (M) · $8 \times 5 = 40$ (O) · $11 \times 7 = 77$ (V) · $2 \times 1 = 2$ (H) · $3 \times 1 = 3$ (R) · $5 \times 5 = 25$ (D) · $5 \times 4 = 20$ (E) · $10 \times 11 = 110$ (U)

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

$108 \div 12 = 9$ · $33 \div 11 = 3$ · $12 \div 1 = 12$ · $7 \div 1 = 7$ · $8 \div 2 = 4$ · $80 \div 10 = 8$ · $40 \div 4 = 10$ · $18 \div 9 = 2$ · $48 \div 8 = 6$ · $4 \div 4 = 1$ · $22 \div 2 = 11$