The Whiskers Haven Mystery

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

Detective: _____ **Date:** _____

The Golden Fish Trophy was swiped right from the main stage of the Purrfect Paws Expo. A sneaky villain snuck past security cameras leaving only paw prints and catnip dust behind. Detective Whiskers must analyze the suspect list to catch the 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 Prowling Bandit is _____

Possible suspects

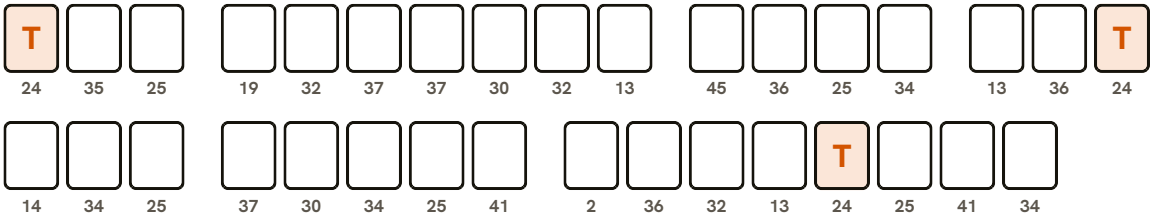
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SPECIALTY SKILL	GADGET	DOMINANT PAW	FUR TYPE	DISTRACTION
Luna	Night Vision	Claw Grapple	Right Paws	Sleek Black	Squeaky Toys
Cheshire	Wall Climbing	Silent Paws	Right Paws	Sleek Black	Tuna Smell
Nala	Stealth Sneaking	Catmint Bomb	Left Paws	Tabby Stripe	Squeaky Toys
Cleo	Stealth Sneaking	Silent Paws	Right Paws	Sleek Black	Squeaky Toys
Felix	Wall Climbing	Laser Pointer	Right Paws	Tabby Stripe	Squeaky Toys
Simba	Loud Meowing	Catnip Spray	Right Paws	Tabby Stripe	Tuna Smell
Bella	Wall Climbing	Laser Pointer	Left Paws	Calico Patch	Yarn Balls
Whiskers	Super Leaping	Silent Paws	Right Paws	Tabby Stripe	Tuna Smell
Mittens	Stealth Sneaking	Catmint Bomb	Right Paws	Tabby Stripe	Squeaky Toys
Jasper	Super Leaping	Claw Grapple	Right Paws	Calico Patch	Tuna Smell
Otis	Night Vision	Claw Grapple	Right Paws	Tabby Stripe	Squeaky Toys
Oliver	Wall Climbing	Catmint Bomb	Right Paws	Tabby Stripe	Squeaky Toys
Garfield	Wall Climbing	Silent Paws	Left Paws	Sleek Black	Yarn Balls
Penelope	Wall Climbing	Catnip Spray	Left Paws	Calico Patch	Yarn Balls
Sylvester	Stealth Sneaking	Silent Paws	Right Paws	Tabby Stripe	Yarn Balls
Milo	Super Leaping	Laser Pointer	Right Paws	Tabby Stripe	Yarn Balls
Socks	Wall Climbing	Silent Paws	Left Paws	Calico Patch	Tuna Smell
Ziggy	Loud Meowing	Laser Pointer	Right Paws	Tabby Stripe	Yarn Balls
Barnaby	Night Vision	Silent Paws	Right Paws	Tabby Stripe	Tuna Smell
Duchess	Super Leaping	Silent Paws	Right Paws	Tabby Stripe	Squeaky Toys
Tom	Loud Meowing	Catmint Bomb	Left Paws	Calico Patch	Yarn Balls

CLUE 1 Percentages

> The arena manager calculates percentage discounts on entry tickets to decode the mystery digit.

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



5% of 480 = ☐ → T

40% of 90 = ☐ → O

5% of 280 = ☐ → U

5% of 900 = ☐ → D

20% of 185 = ☐ → L

25% of 140 = ☐ → H

25% of 76 = ☐ → V

20% of 65 = ☐ → N

20% of 150 = ☐ → A

40% of 85 = ☐ → S

10% of 320 = ☐ → I

5% of 500 = ☐ → E

5% of 820 = ☐ → R

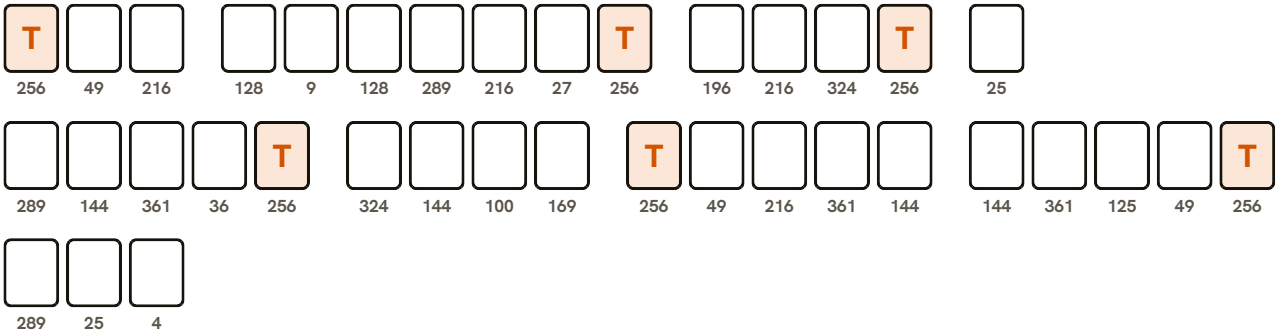
50% of 4 = ☐ → P

Scratch space:

CLUE 2 Exponents

To unlock the security door, you must evaluate an exponential score on the display grid.

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



2^8 = ☐ → T

19^2 = ☐ → I

10^2 = ☐ → O

18^2 = ☐ → F

14^2 = ☐ → L

5^3 = ☐ → G

3^2 = ☐ → U

2^7 = ☐ → S

6^2 = ☐ → N

13^2 = ☐ → M

2^2 = ☐ → W

6^3 = ☐ → E

5^2 = ☐ → A

7^2 = ☐ → H

17^2 = ☐ → P

3^3 = ☐ → C

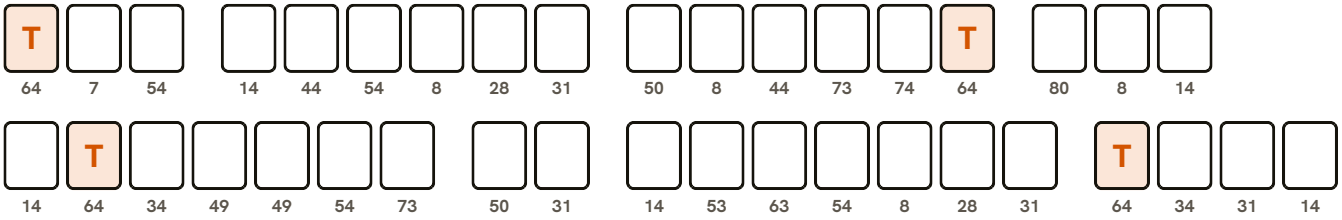
12^2 = ☐ → R

Scratch space:

CLUE 3 Order of operations

Follow the correct order of operations on the grooming station schedule to get the code.

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



10 × 7 - 6 = ☐ → T

10 × 5 - 6 = ☐ → N

9 × 9 - 18 = ☐ → U

29 + 4 × 5 = ☐ → P

52 + 4 × 7 = ☐ → W

26 + 2 × 4 = ☐ → O

8 + 2 × 3 = ☐ → S

8 × 7 - 28 = ☐ → K

3 + 2 × 2 = ☐ → H

53 + 4 × 5 = ☐ → D

27 + 9 × 3 = ☐ → E

5 + 8 × 6 = ☐ → Q

66 + 2 × 4 = ☐ → I

19 + 4 × 3 = ☐ → Y

18 + 8 × 4 = ☐ → B

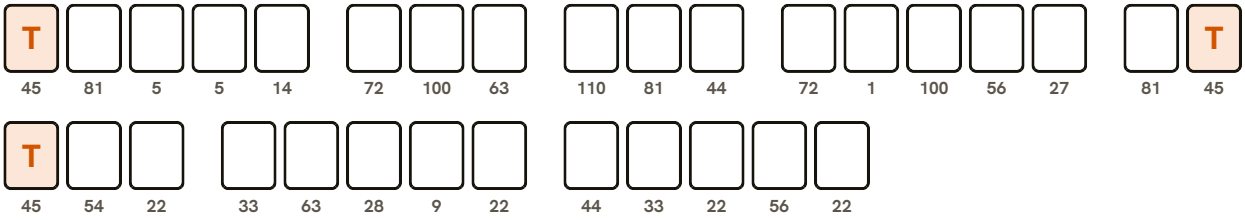
2 + 2 × 3 = ☐ → A

Scratch space:

CLUE 4 Multiplication facts (1-12)

Multiply the number of kibble bags stacked in each row to uncover the next clue.

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



5 × 9 = ☐ → T

9 × 9 = ☐ → A

9 × 6 = ☐ → H

11 × 2 = ☐ → E

11 × 3 = ☐ → C

9 × 7 = ☐ → R

3 × 9 = ☐ → D

1 × 1 = ☐ → O

10 × 11 = ☐ → W

7 × 8 = ☐ → N

7 × 2 = ☐ → Y

4 × 7 = ☐ → I

9 × 1 = ☐ → M

4 × 11 = ☐ → S

5 × 1 = ☐ → B

8 × 9 = ☐ → F

10 × 10 = ☐ → U

Scratch space:

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

Divide the batch of tuna treats evenly among the adoption pens to reveal the final answer.

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:

44 ÷ 4 = ☐	30 ÷ 5 = ☐	10 ÷ 1 = ☐	28 ÷ 7 = ☐	22 ÷ 11 = ☐
70 ÷ 10 = ☐	45 ÷ 9 = ☐	8 ÷ 8 = ☐	54 ÷ 6 = ☐	120 ÷ 10 = ☐
9 ÷ 3 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain scaled the high scratch post, then sprayed catnip aroma.
2. The villain scaled the high scratch post, then shined a laser beam.
3. The villain distracted the judges with meows, then shined a laser beam.
4. The villain leaped across the show ring, then sprayed catnip aroma.
5. The villain leaped across the show ring, then latched on with a claw grapple.
6. The villain snuck past the security guards, then dropped a catmint smoke bomb.
7. The villain distracted the judges with meows, then latched on with a claw grapple.
8. The villain scaled the high scratch post, then dropped a catmint smoke bomb.
9. The villain prowled in the dark hallway, then dropped a catmint smoke bomb.
10. The villain prowled in the dark hallway, then latched on with a claw grapple.
11. The villain leaped across the show ring, then muffled their footsteps.
12. The villain prowled in the dark hallway, then muffled their footsteps.

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TEACHER / PARENT

Answer Key

The Whiskers Haven Mystery

Culprit: Oliver

Wall Climbing · Catmint Bomb · Right Paws · Tabby Stripe · Squeaky Toys

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE VILLAIN DOES NOT USE LASER POINTERS"

5% of 480 = 24 (T) · 40% of 90 = 36 (O) · 5% of 280 = 14 (U) · 5% of 900 = 45 (D) · 20% of 185 = 37 (L) · 25% of 140 = 35 (H) · 25% of 76 = 19 (V) · 20% of 65 = 13 (N) · 20% of 150 = 30 (A) · 40% of 85 = 34 (S) · 10% of 320 = 32 (I) · 5% of 500 = 25 (E) · 5% of 820 = 41 (R) · 50% of 4 = 2 (P)

Clue 2 (Exponents): "THE SUSPECT LEFT A PRINT FROM THEIR RIGHT PAW"

2^8 = 256 (T) · 19^2 = 361 (I) · 10^2 = 100 (O) · 18^2 = 324 (F) · 14^2 = 196 (L) · 5^3 = 125 (G) · 3^2 = 9 (U) · 2^7 = 128 (S) · 6^2 = 36 (N) · 13^2 = 169 (M) · 2^2 = 4 (W) · 6^3 = 216 (E) · 5^2 = 25 (A) · 7^2 = 49 (H) · 17^2 = 289 (P) · 3^3 = 27 (C) · 12^2 = 144 (R)

Clue 3 (Order of operations): "THE SNEAKY BANDIT WAS STOPPED BY SQUEAKY TOYS"

10 × 7 - 6 = 64 (T) · 10 × 5 - 6 = 44 (N) · 9 × 9 - 18 = 63 (U) · 29 + 4 × 5 = 49 (P) · 52 + 4 × 7 = 80 (W) · 26 + 2 × 4 = 34 (O) · 8 + 2 × 3 = 14 (S) · 8 × 7 - 28 = 28 (K) · 3 + 2 × 2 = 7 (H) · 53 + 4 × 5 = 73 (D) · 27 + 9 × 3 = 54 (E) · 5 + 8 × 6 = 53 (Q) · 66 + 2 × 4 = 74 (I) · 19 + 4 × 3 = 31 (Y) · 18 + 8 × 4 = 50 (B) · 2 + 2 × 3 = 8 (A)

Clue 4 (Multiplication facts (1-12)): "TABBY FUR WAS FOUND AT THE CRIME SCENE"

5 × 9 = 45 (T) · 9 × 9 = 81 (A) · 9 × 6 = 54 (H) · 11 × 2 = 22 (E) · 11 × 3 = 33 (C) · 9 × 7 = 63 (R) · 3 × 9 = 27 (D) · 1 × 1 = 1 (O) · 10 × 11 = 110 (W) · 7 × 8 = 56 (N) · 7 × 2 = 14 (Y) · 4 × 7 = 28 (I) · 9 × 1 = 9 (M) · 4 × 11 = 44 (S) · 5 × 1 = 5 (B) · 8 × 9 = 72 (F) · 10 × 10 = 100 (U)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Oliver

44 ÷ 4 = 11 · 30 ÷ 5 = 6 · 10 ÷ 1 = 10 · 28 ÷ 7 = 4 · 22 ÷ 11 = 2 · 70 ÷ 10 = 7 · 45 ÷ 9 = 5 · 8 ÷ 8 = 1 · 54 ÷ 6 = 9 · 120 ÷ 10 = 12 · 9 ÷ 3 = 3