The Great Catnip Caper

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

Detective: _____ **Date:** _____

Someone broke into Whisker Haven Rescue Center and snatched the golden bag of organic catnip! Examine the clues to track down the catnip thief.

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 catnip thief is _____

Possible suspects

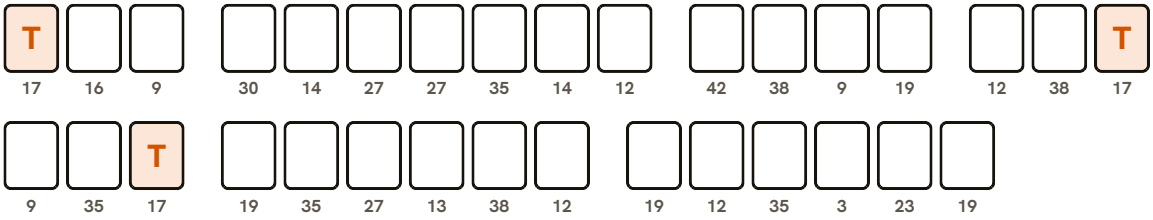
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	FAVORITE TRICK	FAVORITE SNACK	PAW PREFERENCE	FUR PATTERN	DISTRACTION TOY
Jasper	Laser Chase	Milk Drops	Right Paw Dominant	Sleek Black	Squeaky Mouse
Mitzi	High Jump	Salmon Snacks	Right Paw Dominant	Fluffy Calico	Crinkly Balls
Chloe	Box Hiding	Salmon Snacks	Right Paw Dominant	Tabby Stripes	Squeaky Mouse
Pepper	Yarn Unravel	Nip Biscuits	Right Paw Dominant	Fluffy Calico	Squeaky Mouse
Pumpkin	Laser Chase	Chicken Crunch	Right Paw Dominant	Tabby Stripes	Crinkly Balls
Cleo	Box Hiding	Salmon Snacks	Left Paw Dominant	Tabby Stripes	Squeaky Mouse
Nala	Laser Chase	Milk Drops	Right Paw Dominant	Sleek Black	Crinkly Balls
Gizmo	Pounce Attack	Nip Biscuits	Right Paw Dominant	Fluffy Calico	Crinkly Balls
Daisy	High Jump	Chicken Crunch	Left Paw Dominant	Sleek Black	Feather Wand
Rosie	High Jump	Chicken Crunch	Right Paw Dominant	Fluffy Calico	Crinkly Balls
Hazel	High Jump	Salmon Snacks	Left Paw Dominant	Tabby Stripes	Feather Wand
Oscar	High Jump	Nip Biscuits	Right Paw Dominant	Fluffy Calico	Crinkly Balls
Buster	High Jump	Chicken Crunch	Left Paw Dominant	Fluffy Calico	Feather Wand
Barnaby	Yarn Unravel	Chicken Crunch	Right Paw Dominant	Fluffy Calico	Feather Wand
Smokey	Laser Chase	Chicken Crunch	Left Paw Dominant	Tabby Stripes	Squeaky Mouse
Milo	Pounce Attack	Chicken Crunch	Right Paw Dominant	Tabby Stripes	Crinkly Balls
Peanut	Box Hiding	Milk Drops	Left Paw Dominant	Tabby Stripes	Squeaky Mouse
Ziggy	High Jump	Tuna Bites	Left Paw Dominant	Sleek Black	Crinkly Balls
Bella	Yarn Unravel	Tuna Bites	Right Paw Dominant	Fluffy Calico	Crinkly Balls
Simba	Yarn Unravel	Nip Biscuits	Right Paw Dominant	Sleek Black	Crinkly Balls
Shadow	Laser Chase	Milk Drops	Left Paw Dominant	Fluffy Calico	Crinkly Balls

CLUE 1 Percentages

A sensor at the entrance calculated the percentage of shelter rooms searched before the suspect fled.

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



25% of 68 = ☐ → T

50% of 26 = ☐ → M

5% of 320 = ☐ → H

75% of 40 = ☐ → V

20% of 115 = ☐ → K

20% of 45 = ☐ → E

10% of 270 = ☐ → L

40% of 30 = ☐ → N

20% of 210 = ☐ → D

10% of 350 = ☐ → A

5% of 60 = ☐ → C

10% of 140 = ☐ → I

5% of 380 = ☐ → S

25% of 152 = ☐ → O

Scratch space:

CLUE 2 Exponents

> Security logs saved the vault code as a repeated factor using exponents.

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

L																			
216	16	324	324	169	64	32	4	225	361	4	4	324	121	64	16	256	324	81	

81	36	4	400	9	64	16	25	36	324	121	9	400	81	324	169	121

6^3 = ☐ → L

9^2 = ☐ → S

6^2 = ☐ → H

5^2 = ☐ → G

13^2 = ☐ → E

2^8 = ☐ → N

15^2 = ☐ → X

20^2 = ☐ → W

3^2 = ☐ → A

2^4 = ☐ → I

11^2 = ☐ → P

18^2 = ☐ → T

2^2 = ☐ → O

2^6 = ☐ → R

19^2 = ☐ → F

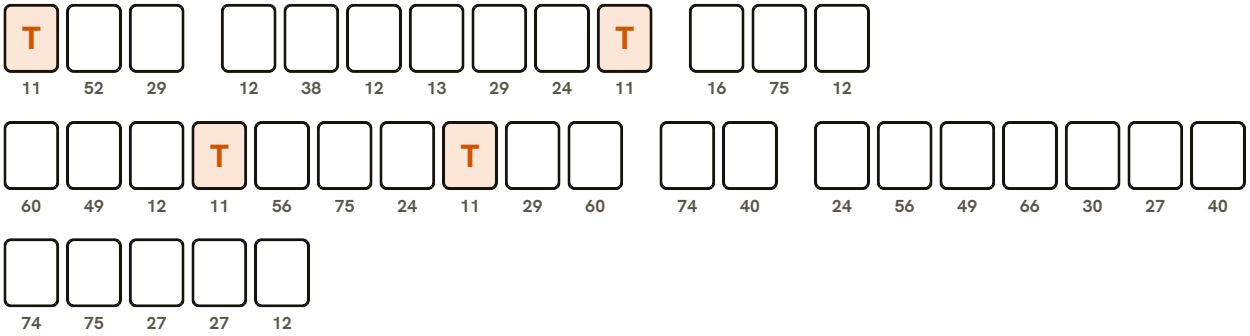
2^5 = ☐ → B

Scratch space:

CLUE 3 Order of operations

The shelter computer locked the evidence room with a multi step order of operations code.

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



3 + 4 × 2 = ☐ → T

3 + 2 × 5 = ☐ → P

5 × 8 - 16 = ☐ → C

37 + 5 × 3 = ☐ → H

7 × 5 - 8 = ☐ → L

51 + 3 × 8 = ☐ → A

17 + 4 × 3 = ☐ → E

7 × 6 - 26 = ☐ → W

50 + 2 × 8 = ☐ → N

54 + 5 × 4 = ☐ → B

45 + 3 × 5 = ☐ → D

10 × 5 - 10 = ☐ → Y

2 + 4 × 7 = ☐ → K

6 + 2 × 3 = ☐ → S

26 + 6 × 5 = ☐ → R

9 × 6 - 16 = ☐ → U

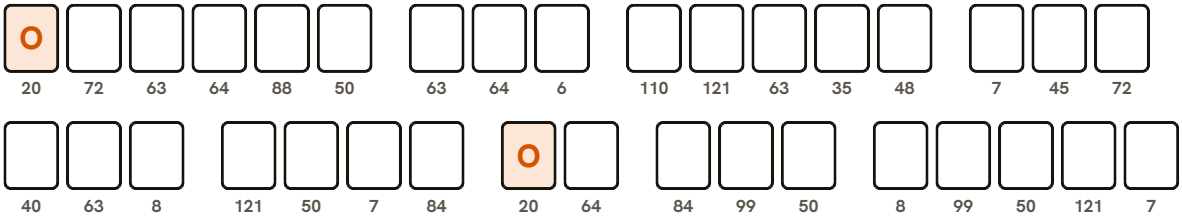
14 + 5 × 7 = ☐ → I

Scratch space:

CLUE 4 Multiplication facts (1-12)

> Detectives counted rows of tipped cat food tins to calculate the total mess.

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



4 × 5 = ☐ → O	8 × 8 = ☐ → N	4 × 12 = ☐ → K	7 × 1 = ☐ → F
12 × 7 = ☐ → T	10 × 5 = ☐ → E	5 × 7 = ☐ → C	
9 × 11 = ☐ → H	5 × 9 = ☐ → U	3 × 2 = ☐ → D	
6 × 12 = ☐ → R	4 × 2 = ☐ → S	8 × 11 = ☐ → G	
11 × 11 = ☐ → L	7 × 9 = ☐ → A	8 × 5 = ☐ → W	
10 × 11 = ☐ → B			

Scratch space:

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

> Volunteers split the remaining stray treats equally among the rescue pens.

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:

28 ÷ 4 = ☐ | 6 ÷ 2 = ☐ | 50 ÷ 5 = ☐ | 90 ÷ 10 = ☐ | 20 ÷ 10 = ☐

66 ÷ 11 = ☐ | 30 ÷ 6 = ☐ | 121 ÷ 11 = ☐ | 96 ÷ 12 = ☐ | 5 ÷ 5 = ☐

60 ÷ 5 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain unraveled the ball of yarn, then nibbled on nip biscuits.
2. The villain chased laser pointer lights, then munched on tuna bites.
3. The villain pounced onto the tall shelf, then nibbled on nip biscuits.
4. The villain unraveled the ball of yarn, then munched on tuna bites.
5. The villain pounced onto the tall shelf, then snacked on chicken crunch.
6. The villain pounced onto the tall shelf, then drank sweet milk drops.
7. The villain jumped over the safety gate, then nibbled on nip biscuits.
8. The villain chased laser pointer lights, then drank sweet milk drops.
9. The villain pounced onto the tall shelf, then munched on tuna bites.
10. The villain jumped over the safety gate, then snacked on chicken crunch.
11. The villain chased laser pointer lights, then nibbled on nip biscuits.
12. The villain hid inside a cardboard box, then snacked on chicken crunch.

TEACHER / PARENT

Answer Key

The Great Catnip Caper

Culprit: Bella

Yarn Unravel · Tuna Bites · Right Paw Dominant · Fluffy Calico · Crinkly Balls

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE VILLAIN DOES NOT EAT SALMON SNACKS"

25% of 68 = 17 (T) · 50% of 26 = 13 (M) · 5% of 320 = 16 (H) · 75% of 40 = 30 (V) · 20% of 115 = 23 (K) · 20% of 45 = 9 (E) · 10% of 270 = 27 (L) · 40% of 30 = 12 (N) · 20% of 210 = 42 (D) · 10% of 350 = 35 (A) · 5% of 60 = 3 (C) · 10% of 140 = 14 (I) · 5% of 380 = 19 (S) · 25% of 152 = 38 (O)

Clue 2 (Exponents): "LITTER BOX FOOTPRINTS SHOW A RIGHT PAW STEP"

6^3 = 216 (L) · 9^2 = 81 (S) · 6^2 = 36 (H) · 5^2 = 25 (G) · 13^2 = 169 (E) · 2^8 = 256 (N) · 15^2 = 225 (X) · 20^2 = 400 (W) · 3^2 = 9 (A) · 2^4 = 16 (I) · 11^2 = 121 (P) · 18^2 = 324 (T) · 2^2 = 4 (O) · 2^6 = 64 (R) · 19^2 = 361 (F) · 2^5 = 32 (B)

Clue 3 (Order of operations): "THE SUSPECT WAS DISTRACTED BY CRINKLY BALLS"

3 + 4 × 2 = 11 (T) · 3 + 2 × 5 = 13 (P) · 5 × 8 - 16 = 24 (C) · 37 + 5 × 3 = 52 (H) · 7 × 5 - 8 = 27 (L) · 51 + 3 × 8 = 75 (A) · 17 + 4 × 3 = 29 (E) · 7 × 6 - 26 = 16 (W) · 50 + 2 × 8 = 66 (N) · 54 + 5 × 4 = 74 (B) · 45 + 3 × 5 = 60 (D) · 10 × 5 - 10 = 40 (Y) · 2 + 4 × 7 = 30 (K) · 6 + 2 × 3 = 12 (S) · 26 + 6 × 5 = 56 (R) · 9 × 6 - 16 = 38 (U) · 14 + 5 × 7 = 49 (I)

Clue 4 (Multiplication facts (1-12)): "ORANGE AND BLACK FUR WAS LEFT ON THE SHELF"

4 × 5 = 20 (O) · 8 × 8 = 64 (N) · 4 × 12 = 48 (K) · 7 × 1 = 7 (F) · 12 × 7 = 84 (T) · 10 × 5 = 50 (E) · 5 × 7 = 35 (C) · 9 × 11 = 99 (H) · 5 × 9 = 45 (U) · 3 × 2 = 6 (D) · 6 × 12 = 72 (R) · 4 × 2 = 8 (S) · 8 × 11 = 88 (G) · 11 × 11 = 121 (L) · 7 × 9 = 63 (A) · 8 × 5 = 40 (W) · 10 × 11 = 110 (B)

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

28 ÷ 4 = 7 · 6 ÷ 2 = 3 · 50 ÷ 5 = 10 · 90 ÷ 10 = 9 · 20 ÷ 10 = 2 · 66 ÷ 11 = 6 · 30 ÷ 6 = 5 · 121 ÷ 11 = 11 · 96 ÷ 12 = 8 · 5 ÷ 5 = 1 · 60 ÷ 5 = 12