The Star Paw Station Heist

Grade 4 math · Place value, Addition, Subtraction, Multiplication, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Oh no! A rogue robotic kitten has sneaked aboard the Star Paw Space Station and swapped the rocket fuel with catnip juice! Commander Barnaby needs our help. Find the rogue robo-kitty before they turn off the gravity!

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 Rogue Robo-Kitty is _____

Possible suspects

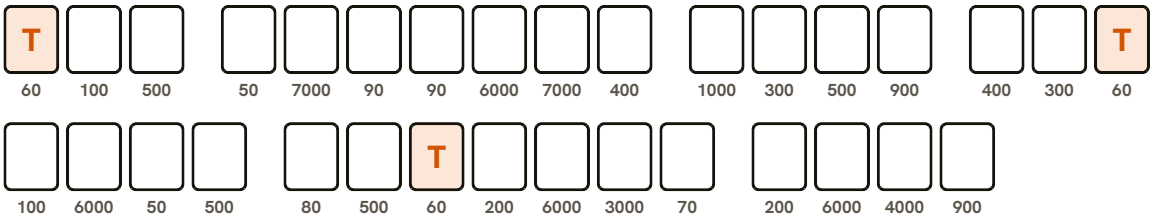
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SPACE LASER	TAIL TOOL	ANTENNA LIGHT	FUR FINISH	SYSTEM GLITCH
Comet Scratch	Cosmic Fish Beam	Jetpack Paws	Right Side Antenna Glow	Fluffy Orange Fleece	Magnetic Fish Toy
Nova Tail	Cosmic Fish Beam	Hover Disk Collar	Right Side Antenna Glow	Fluffy Orange Fleece	Ball of Tin Foil
Buster Chip	Super Grav-Booster	Hover Disk Collar	Right Side Antenna Glow	Chrome Metal Shell	Magnetic Fish Toy
Pixel Paws	Hyper Laser Pointer	Hover Disk Collar	Left Side Antenna Glow	Chrome Metal Shell	Ball of Tin Foil
Luna Bot	Cosmic Fish Beam	Scanner Ear Set	Right Side Antenna Glow	Sleek Carbon Fiber	Ball of Tin Foil
Turbo Boots	Cosmic Fish Beam	Hover Disk Collar	Right Side Antenna Glow	Chrome Metal Shell	Magnetic Fish Toy
Orion Meow	Super Grav-Booster	Hover Disk Collar	Right Side Antenna Glow	Sleek Carbon Fiber	Ball of Tin Foil
Cosmo Whiskers	Solar Heat Ray	Solar Panel Whiskers	Right Side Antenna Glow	Sleek Carbon Fiber	Ball of Tin Foil
Cyber Felix	Mega Yarn Magnet	Jetpack Paws	Left Side Antenna Glow	Chrome Metal Shell	High Pitch Whistle
Matrix Tail	Solar Heat Ray	Solar Panel Whiskers	Right Side Antenna Glow	Fluffy Orange Fleece	Magnetic Fish Toy
Radar Mew	Mega Yarn Magnet	Jetpack Paws	Right Side Antenna Glow	Sleek Carbon Fiber	Ball of Tin Foil
Garfield Tech	Cosmic Fish Beam	Jetpack Paws	Right Side Antenna Glow	Chrome Metal Shell	High Pitch Whistle
Glitch Shadow	Cosmic Fish Beam	Hover Disk Collar	Right Side Antenna Glow	Sleek Carbon Fiber	Magnetic Fish Toy
Byte Whiskers	Super Grav-Booster	Scanner Ear Set	Left Side Antenna Glow	Fluffy Orange Fleece	Magnetic Fish Toy
Gizmo Paw	Solar Heat Ray	Hover Disk Collar	Right Side Antenna Glow	Sleek Carbon Fiber	Ball of Tin Foil
Astro Socks	Super Grav-Booster	Hover Disk Collar	Right Side Antenna Glow	Sleek Carbon Fiber	High Pitch Whistle
Rusty Bolt	Super Grav-Booster	Rocket Booster Tail	Left Side Antenna Glow	Sleek Carbon Fiber	Ball of Tin Foil
Zappy Rover	Mega Yarn Magnet	Jetpack Paws	Right Side Antenna Glow	Fluffy Orange Fleece	Ball of Tin Foil
Stella Purr	Super Grav-Booster	Jetpack Paws	Left Side Antenna Glow	Chrome Metal Shell	Magnetic Fish Toy
Apollo Boots	Super Grav-Booster	Jetpack Paws	Left Side Antenna Glow	Sleek Carbon Fiber	High Pitch Whistle
Major Tomcat	Mega Yarn Magnet	Solar Panel Whiskers	Left Side Antenna Glow	Fluffy Orange Fleece	Ball of Tin Foil

CLUE 1 Place value

> The ship computer shows a digital error code on the screen. Let us look at the place value digits to crack the code and find our first clue.

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



What is the value of the 6 in 5,564? ☐ → **T**

What is the value of the 7 in 47,289? ☐ → **I**

What is the value of the 1 in 61,063? ☐ → **D**

What is the value of the 6 in 6,893? ☐ → **A**

What is the value of the 9 in 948? ☐ → **S**

What is the value of the 4 in 4,273? ☐ → **W**

What is the value of the 7 in 9,472? ☐ → **K**

What is the value of the 8 in 984? ☐ → **J**

What is the value of the 1 in 5,108? ☐ → **H**

What is the value of the 4 in 6,435? ☐ → **N**

What is the value of the 3 in 6,361? ☐ → **O**

What is the value of the 2 in 259? ☐ → **P**

What is the value of the 3 in 13,145? ☐ → **C**

What is the value of the 5 in 250? ☐ → **V**

What is the value of the 9 in 896? ☐ → **L**

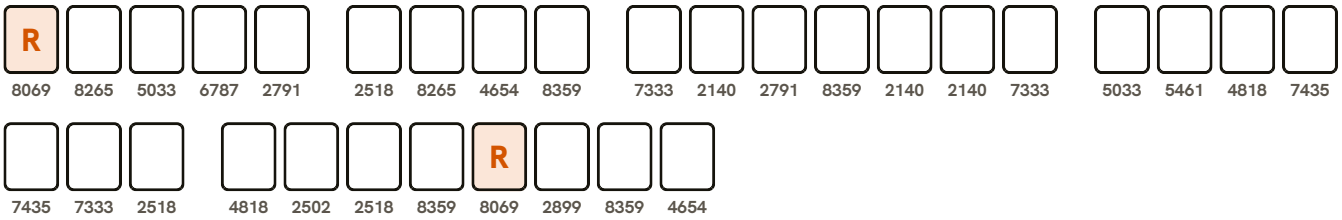
What is the value of the 5 in 8,530? ☐ → **E**

Scratch space:

CLUE 2 Addition

A pile of dropped metal bolts lies on the floor. Let us add them all together to find out how many the robo-kitty lost.

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



3893 + 4176 = ☐ → R

1674 + 3359 = ☐ → G

2398 + 4389 = ☐ → H

2717 + 4616 = ☐ → A

1139 + 1760 = ☐ → V

4320 + 3945 = ☐ → I

5441 + 2918 = ☐ → E

2131 + 2523 = ☐ → D

1525 + 977 = ☐ → B

1957 + 2861 = ☐ → O

1853 + 3608 = ☐ → L

1338 + 1453 = ☐ → T

1739 + 779 = ☐ → S

4483 + 2952 = ☐ → W

947 + 1193 = ☐ → N

Scratch space:

CLUE 3 Subtraction

> The thief took some star cookies from the ship pantry. We can subtract the leftovers to see how many cookies are missing.

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

6344 - 3829 = ☐ → A

5593 - 2394 = ☐ → D

9477 - 1716 = ☐ → S

6964 - 2708 = ☐ → T

4158 - 2070 = ☐ → N

10458 - 4880 = ☐ → B

7118 - 2828 = ☐ → C

5800 - 1265 = ☐ → R

5787 - 4703 = ☐ → H

12893 - 4087 = ☐ → I

8883 - 3615 = ☐ → F

2436 - 1173 = ☐ → O

9094 - 1110 = ☐ → V

6774 - 4118 = ☐ → L

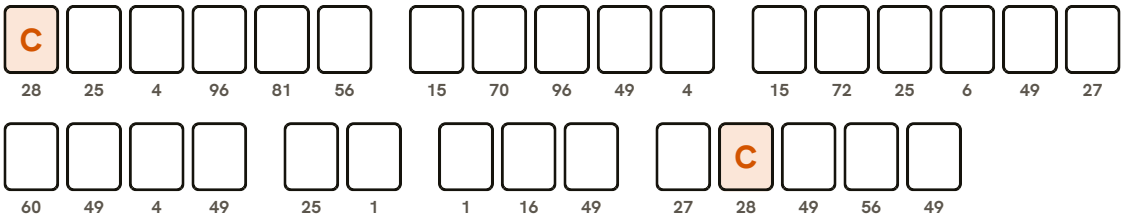
9247 - 2282 = ☐ → E

Scratch space:

CLUE 4 Multiplication facts (1-12)

> We see laser-tag grids glowing on the wall. Let us multiply the rows and columns to find the total power of the beam.

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



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

Scratch space:

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

> We have a box of spare battery cells. We must divide them equally among the friendly helper bots to power up our trackers.

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:

22 ÷ 11 = ☐ | 48 ÷ 6 = ☐ | 121 ÷ 11 = ☐ | 6 ÷ 6 = ☐ | 36 ÷ 12 = ☐

45 ÷ 5 = ☐ | 30 ÷ 6 = ☐ | 108 ÷ 9 = ☐ | 54 ÷ 9 = ☐ | 63 ÷ 9 = ☐

44 ÷ 11 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain shines a hyper laser pointer, then zooms off on jetpack paws.
2. The villain shoots a solar heat ray, then recharges using solar panel whiskers.
3. The villain triggers a super grav-booster, then recharges using solar panel whiskers.
4. The villain fires a cosmic fish beam, then recharges using solar panel whiskers.
5. The villain turns on a mega yarn magnet, then flies away on a hover disk collar.
6. The villain turns on a mega yarn magnet, then escapes with a rocket booster tail.
7. The villain turns on a mega yarn magnet, then zooms off on jetpack paws.
8. The villain fires a cosmic fish beam, then listens in with a scanner ear set.
9. The villain fires a cosmic fish beam, then flies away on a hover disk collar.
10. The villain triggers a super grav-booster, then flies away on a hover disk collar.
11. The villain shoots a solar heat ray, then flies away on a hover disk collar.
12. The villain turns on a mega yarn magnet, then listens in with a scanner ear set.

TEACHER / PARENT

Answer Key

The Star Paw Station Heist

Culprit: Orion Meow

Super Grav-Booster · Hover Disk Collar · Right Side Antenna Glow · Sleek Carbon Fiber · Ball of Tin Foil

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

Clue 1 (Place value): "THE VILLAIN DOES NOT HAVE JETPACK PAWS"

What is the value of the 6 in 5,564? = 60 (T) · What is the value of the 7 in 47,289? = 7000 (I) · What is the value of the 1 in 61,063? = 1000 (D) · What is the value of the 6 in 6,893? = 6000 (A) · What is the value of the 9 in 948? = 900 (S) · What is the value of the 4 in 4,273? = 4000 (W) · What is the value of the 7 in 9,472? = 70 (K) · What is the value of the 8 in 984? = 80 (J) · What is the value of the 1 in 5,108? = 100 (H) · What is the value of the 4 in 6,435? = 400 (N) · What is the value of the 3 in 6,361? = 300 (O) · What is the value of the 2 in 259? = 200 (P) · What is the value of the 3 in 13,145? = 3000 (C) · What is the value of the 5 in 250? = 50 (V) · What is the value of the 9 in 896? = 90 (L) · What is the value of the 5 in 8,530? = 500 (E)

Clue 2 (Addition): "RIGHT SIDE ANTENNA GLOW WAS OBSERVED"

3893 + 4176 = 8069 (R) · 1674 + 3359 = 5033 (G) · 2398 + 4389 = 6787 (H) · 2717 + 4616 = 7333 (A) · 1139 + 1760 = 2899 (V) · 4320 + 3945 = 8265 (I) · 5441 + 2918 = 8359 (E) · 2131 + 2523 = 4654 (D) · 1525 + 977 = 2502 (B) · 1957 + 2861 = 4818 (O) · 1853 + 3608 = 5461 (L) · 1338 + 1453 = 2791 (T) · 1739 + 779 = 2518 (S) · 4483 + 2952 = 7435 (W) · 947 + 1193 = 2140 (N)

Clue 3 (Subtraction): "A BALL OF TIN FOIL SCARED THE VILLAIN"

6344 - 3829 = 2515 (A) · 5593 - 2394 = 3199 (D) · 9477 - 1716 = 7761 (S) · 6964 - 2708 = 4256 (T) · 4158 - 2070 = 2088 (N) · 10458 - 4880 = 5578 (B) · 7118 - 2828 = 4290 (C) · 5800 - 1265 = 4535 (R) · 5787 - 4703 = 1084 (H) · 12893 - 4087 = 8806 (I) · 8883 - 3615 = 5268 (F) · 2436 - 1173 = 1263 (O) · 9094 - 1110 = 7984 (V) · 6774 - 4118 = 2656 (L) · 9247 - 2282 = 6965 (E)

Clue 4 (Multiplication facts (1-12)): "CARBON FIBER FLAKES WERE AT THE SCENE"

4 × 7 = 28 (C) · 1 × 1 = 1 (T) · 8 × 7 = 56 (N) · 6 × 12 = 72 (L) · 3 × 2 = 6 (K) · 5 × 5 = 25 (A) · 12 × 8 = 96 (B) · 7 × 7 = 49 (E) · 3 × 5 = 15 (F) · 2 × 2 = 4 (R) · 10 × 7 = 70 (I) · 4 × 4 = 16 (H) · 9 × 9 = 81 (O) · 10 × 6 = 60 (W) · 9 × 3 = 27 (S)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Orion Meow

22 ÷ 11 = 2 · 48 ÷ 6 = 8 · 121 ÷ 11 = 11 · 6 ÷ 6 = 1 · 36 ÷ 12 = 3 · 45 ÷ 5 = 9 · 30 ÷ 6 = 5 · 108 ÷ 9 = 12 · 54 ÷ 9 = 6 · 63 ÷ 9 = 7 · 44 ÷ 11 = 4