



# The Case of the Cosmic Cat Cruiser

Grade 2 math · Addition, Subtraction, Multiplication, Rounding, Missing addends · Reading level grades 1-2

**Detective:** \_\_\_\_\_ **Date:** \_\_\_\_\_

The golden tuna trophy has been swiped from the Cosmic Cat Cruiser! A sneaky Space Bandit Cat has taken it, and we must find out who did it before we land on the Moon!

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 Space Bandit Cat is** \_\_\_\_\_

# Possible suspects

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

| NAME     | SPACE POWER      | GADGET POWER    | CLAW GRIP   | FUR COLOR  | SECRET WEAKNESS |
|----------|------------------|-----------------|-------------|------------|-----------------|
| Loki     | Astro Purr       | Nebula Jump     | Right-pawed | Silver Fur | Water Spray     |
| Simba    | Super Claw Swipe | Star Shield     | Right-pawed | Calico Fur | Catnip Mist     |
| Comet    | Jetpack Bounce   | Bubble Trap     | Left-pawed  | Orange Fur | Water Spray     |
| Ziggy    | Jetpack Bounce   | Warp Speed Dash | Left-pawed  | Silver Fur | Catnip Mist     |
| Nova     | Zero-G Float     | Cosmic Meow     | Right-pawed | Silver Fur | Catnip Mist     |
| Shadow   | Zero-G Float     | Nebula Jump     | Left-pawed  | Orange Fur | Catnip Mist     |
| Socks    | Jetpack Bounce   | Bubble Trap     | Right-pawed | Orange Fur | Catnip Mist     |
| Stella   | Laser Beam Eyes  | Warp Speed Dash | Left-pawed  | Silver Fur | Water Spray     |
| Astro    | Zero-G Float     | Nebula Jump     | Right-pawed | Silver Fur | Water Spray     |
| Buster   | Jetpack Bounce   | Star Shield     | Left-pawed  | Orange Fur | Squeaky Toy     |
| Orion    | Laser Beam Eyes  | Nebula Jump     | Right-pawed | Orange Fur | Water Spray     |
| Pip      | Laser Beam Eyes  | Cosmic Meow     | Right-pawed | Orange Fur | Squeaky Toy     |
| Barnaby  | Super Claw Swipe | Cosmic Meow     | Left-pawed  | Calico Fur | Squeaky Toy     |
| Whiskers | Super Claw Swipe | Nebula Jump     | Left-pawed  | Silver Fur | Water Spray     |
| Mittens  | Astro Purr       | Star Shield     | Right-pawed | Silver Fur | Water Spray     |
| Pluto    | Super Claw Swipe | Star Shield     | Right-pawed | Silver Fur | Catnip Mist     |
| Clover   | Laser Beam Eyes  | Star Shield     | Right-pawed | Orange Fur | Catnip Mist     |
| Milo     | Super Claw Swipe | Bubble Trap     | Right-pawed | Silver Fur | Water Spray     |
| Leo      | Zero-G Float     | Nebula Jump     | Left-pawed  | Silver Fur | Squeaky Toy     |
| Boots    | Jetpack Bounce   | Cosmic Meow     | Right-pawed | Silver Fur | Water Spray     |
| Cosmo    | Super Claw Swipe | Warp Speed Dash | Left-pawed  | Silver Fur | Squeaky Toy     |

## CLUE 1 Addition

We count the empty space milk cartons left on the deck. Add them up to get our first clue!

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

|              |             |             |             |             |             |             |             |              |             |             |             |             |             |             |             |              |             |             |             |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| <div>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>T</div> | <div></div> | <div></div> | <div></div> |
| 96           | 23          | 78          | 82          | 84          | 54          | 32          | 66          | 96           | 32          | 22          | 78          | 37          | 54          | 22          | 96          | 91           | 37          | 78          |             |

  

|             |             |              |             |             |             |             |             |             |             |             |
|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <div></div> | <div></div> | <div>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 84          | 37          | 96           | 84          | 70          | 37          | 23          | 66          | 78          | 67          | 32          |

$64 + 32 = \square \rightarrow \boxed{\text{T}}$

$44 + 26 = \square \rightarrow \boxed{\text{R}}$

$41 + 50 = \square \rightarrow \boxed{\text{U}}$

$48 + 36 = \square \rightarrow \boxed{\text{A}}$

$48 + 30 = \square \rightarrow \boxed{\text{E}}$

$58 + 24 = \square \rightarrow \boxed{\text{B}}$

$29 + 38 = \square \rightarrow \boxed{\text{L}}$

$11 + 12 = \square \rightarrow \boxed{\text{H}}$

$23 + 9 = \square \rightarrow \boxed{\text{D}}$

$27 + 27 = \square \rightarrow \boxed{\text{N}}$

$14 + 23 = \square \rightarrow \boxed{\text{S}}$

$16 + 6 = \square \rightarrow \boxed{\text{O}}$

$37 + 29 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

## CLUE 2 Subtraction

A helper dropped some shiny star badges on the floor. Take away the lost badges to find the next clue!

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

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| T  |    |    |    |    |    |    |    |    | T  |    |    |    |    |    |    |    |  |
| 79 | 55 | 78 | 81 | 72 | 59 | 57 | 77 | 79 | 41 | 58 | 78 | 58 | 61 | 59 | 70 | 64 |  |

|    |    |    |    |    |    |    |    |    |    |    |  |
|----|----|----|----|----|----|----|----|----|----|----|--|
| T  |    |    |    |    |    |    |    |    |    |    |  |
| 79 | 55 | 78 | 17 | 77 | 83 | 55 | 79 | 89 | 72 | 27 |  |

|                                           |                                           |                                           |
|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| $91 - 12 = \square \rightarrow \text{T}$  | $100 - 11 = \square \rightarrow \text{P}$ | $46 - 29 = \square \rightarrow \text{R}$  |
| $83 - 22 = \square \rightarrow \text{O}$  | $64 - 7 = \square \rightarrow \text{D}$   | $104 - 26 = \square \rightarrow \text{E}$ |
| $92 - 11 = \square \rightarrow \text{B}$  | $107 - 30 = \square \rightarrow \text{I}$ | $70 - 12 = \square \rightarrow \text{S}$  |
| $70 - 11 = \square \rightarrow \text{N}$  | $79 - 9 = \square \rightarrow \text{L}$   | $46 - 19 = \square \rightarrow \text{W}$  |
| $59 - 18 = \square \rightarrow \text{U}$  | $74 - 19 = \square \rightarrow \text{H}$  | $98 - 34 = \square \rightarrow \text{Y}$  |
| $103 - 20 = \square \rightarrow \text{G}$ | $88 - 16 = \square \rightarrow \text{A}$  |                                           |

Scratch space:

## CLUE 3

## Multiplication facts (1-12)

The cute space mice sit in equal rows on the kitchen shelf. Multiply the rows to see what they found!

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

|   |   |    |     |   |     |    |   |    |   |   |    |     |    |    |    |    |
|---|---|----|-----|---|-----|----|---|----|---|---|----|-----|----|----|----|----|
| A |   |    |     | A |     |    |   |    | A |   |    |     |    |    |    |    |
| 8 | 1 | 54 | 110 | 8 | 144 | 20 | 3 | 27 | 8 | 5 | 36 | 110 | 27 | 21 | 81 | 81 |

  

|   |   |    |    |   |    |    |    |   |    |    |    |   |
|---|---|----|----|---|----|----|----|---|----|----|----|---|
|   |   |    |    |   |    |    | A  |   |    |    |    |   |
| 1 | 5 | 20 | 54 | 5 | 35 | 36 | 64 | 8 | 16 | 32 | 21 | 5 |

$8 \times 1 = \square \rightarrow \boxed{\text{A}}$

$9 \times 9 = \square \rightarrow \boxed{\text{L}}$

$4 \times 4 = \square \rightarrow \boxed{\text{N}}$

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

$3 \times 7 = \square \rightarrow \boxed{\text{I}}$

$1 \times 1 = \square \rightarrow \boxed{\text{S}}$

$9 \times 4 = \square \rightarrow \boxed{\text{E}}$

$3 \times 9 = \square \rightarrow \boxed{\text{W}}$

$12 \times 12 = \square \rightarrow \boxed{\text{Y}}$

$4 \times 8 = \square \rightarrow \boxed{\text{D}}$

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

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

$5 \times 7 = \square \rightarrow \boxed{\text{H}}$

$8 \times 8 = \square \rightarrow \boxed{\text{B}}$

$1 \times 3 = \square \rightarrow \boxed{\text{F}}$

$11 \times 10 = \square \rightarrow \boxed{\text{R}}$

Scratch space:

## CLUE 4

## Rounding

The stardust radar shows a fuzzy number. Round it to the nearest ten to unlock the video clue!

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

|          |     |     |    |     |     |    |    |    |     |     |     |     |     |     |     |    |     |
|----------|-----|-----|----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| <b>W</b> |     |     |    |     |     |    |    |    |     |     |     |     |     |     |     |    |     |
| 700      | 800 | 900 | 30 | 200 | 400 | 70 | 50 | 90 | 300 | 500 | 800 | 600 | 900 | 200 | 600 | 30 | 400 |

  

|    |    |     |    |    |    |    |     |
|----|----|-----|----|----|----|----|-----|
|    |    |     |    |    |    |    |     |
| 40 | 60 | 800 | 20 | 60 | 80 | 90 | 600 |

Round 705 to the nearest hundred  → **W**

Round 794 to the nearest hundred  → **E**

Round 851 to the nearest hundred  → **F**

Round 612 to the nearest hundred  → **R**

Round 79 to the nearest ten  → **A**

Round 30 to the nearest ten  → **O**

Round 23 to the nearest ten  → **C**

Round 274 to the nearest hundred  → **L**

Round 60 to the nearest ten  → **H**

Round 52 to the nearest ten  → **S**

Round 189 to the nearest hundred  → **U**

Round 424 to the nearest hundred  → **N**

Round 452 to the nearest hundred  → **V**

Round 87 to the nearest ten  → **I**

Round 70 to the nearest ten  → **D**

Round 42 to the nearest ten  → **T**

Scratch space:

**CLUE 5****Missing addends - the last clue**

We need ten fuel packs to run the scanner, but we only have some. Find how many are missing to get the last clue!

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:**

$5 + \underline{\quad} = 13$

$10 + \underline{\quad} = 20$

$4 + \underline{\quad} = 8$

$2 + \underline{\quad} = 9$

$1 + \underline{\quad} = 7$

$3 + \underline{\quad} = 6$

$6 + \underline{\quad} = 8$

$9 + \underline{\quad} = 21$

$2 + \underline{\quad} = 3$

$8 + \underline{\quad} = 13$

$5 + \underline{\quad} = 14$

**Step 2 - cross out the sentence with each answer:**

1. The villain swipes with a super claw, then makes a cosmic meow.
2. The villain bounces with a jetpack, then activates a star shield.
3. The villain swipes with a super claw, then dashes away at warp speed.
4. The villain bounces with a jetpack, then makes a cosmic meow.
5. The villain makes a loud astro purr, then activates a star shield.
6. The villain zaps with laser beam eyes, then makes a cosmic meow.
7. The villain makes a loud astro purr, then throws a bubble trap.
8. The villain floats in zero gravity, then makes a huge nebula jump.
9. The villain floats in zero gravity, then throws a bubble trap.
10. The villain swipes with a super claw, then throws a bubble trap.
11. The villain makes a loud astro purr, then makes a huge nebula jump.
12. The villain swipes with a super claw, then activates a star shield.

# Answer Key

## The Case of the Cosmic Cat Cruiser

### Culprit: Loki

Astro Purr · Nebula Jump · Right-pawed · Silver Fur · Water Spray

Trail: Start 21 → Clue 1 16 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

#### Clue 1 (Addition): "THE BANDIT DOES NOT USE A STAR SHIELD"

$64 + 32 = 96$  (T) ·  $44 + 26 = 70$  (R) ·  $41 + 50 = 91$  (U) ·  $48 + 36 = 84$  (A) ·  $48 + 30 = 78$  (E) ·  $58 + 24 = 82$  (B) ·  $29 + 38 = 67$  (L) ·  $11 + 12 = 23$  (H) ·  $23 + 9 = 32$  (D) ·  $27 + 27 = 54$  (N) ·  $14 + 23 = 37$  (S) ·  $16 + 6 = 22$  (O) ·  $37 + 29 = 66$  (I)

#### Clue 2 (Subtraction): "THE BANDIT USES ONLY THE RIGHT PAW"

$91 - 12 = 79$  (T) ·  $100 - 11 = 89$  (P) ·  $46 - 29 = 17$  (R) ·  $83 - 22 = 61$  (O) ·  $64 - 7 = 57$  (D) ·  $104 - 26 = 78$  (E) ·  $92 - 11 = 81$  (B) ·  $107 - 30 = 77$  (I) ·  $70 - 12 = 58$  (S) ·  $70 - 11 = 59$  (N) ·  $79 - 9 = 70$  (L) ·  $46 - 19 = 27$  (W) ·  $59 - 18 = 41$  (U) ·  $74 - 19 = 55$  (H) ·  $98 - 34 = 64$  (Y) ·  $103 - 20 = 83$  (G) ·  $88 - 16 = 72$  (A)

#### Clue 3 (Multiplication facts (1-12)): "A SPRAY OF WATER WILL STOP THE BANDIT"

$8 \times 1 = 8$  (A) ·  $9 \times 9 = 81$  (L) ·  $4 \times 4 = 16$  (N) ·  $9 \times 6 = 54$  (P) ·  $3 \times 7 = 21$  (I) ·  $1 \times 1 = 1$  (S) ·  $9 \times 4 = 36$  (E) ·  $3 \times 9 = 27$  (W) ·  $12 \times 12 = 144$  (Y) ·  $4 \times 8 = 32$  (D) ·  $5 \times 1 = 5$  (T) ·  $5 \times 4 = 20$  (O) ·  $5 \times 7 = 35$  (H) ·  $8 \times 8 = 64$  (B) ·  $1 \times 3 = 3$  (F) ·  $11 \times 10 = 110$  (R)

#### Clue 4 (Rounding): "WE FOUND SILVER FUR ON THE CHAIR"

Round 705 to the nearest hundred = 700 (W) · Round 794 to the nearest hundred = 800 (E) · Round 851 to the nearest hundred = 900 (F) · Round 612 to the nearest hundred = 600 (R) · Round 79 to the nearest ten = 80 (A) · Round 30 to the nearest ten = 30 (O) · Round 23 to the nearest ten = 20 (C) · Round 274 to the nearest hundred = 300 (L) · Round 60 to the nearest ten = 60 (H) · Round 52 to the nearest ten = 50 (S) · Round 189 to the nearest hundred = 200 (U) · Round 424 to the nearest hundred = 400 (N) · Round 452 to the nearest hundred = 500 (V) · Round 87 to the nearest ten = 90 (I) · Round 70 to the nearest ten = 70 (D) · Round 42 to the nearest ten = 40 (T)

#### Clue 5 (Missing addends): surviving statement is box 11 → Loki

$5 + \underline{\quad} = 13$  = 8 ·  $10 + \underline{\quad} = 20$  = 10 ·  $4 + \underline{\quad} = 8$  = 4 ·  $2 + \underline{\quad} = 9$  = 7 ·  $1 + \underline{\quad} = 7$  = 6 ·  $3 + \underline{\quad} = 6$  = 3 ·  $6 + \underline{\quad} = 8$  = 2 ·  $9 + \underline{\quad} = 21$  = 12 ·  $2 + \underline{\quad} = 3$  = 1 ·  $8 + \underline{\quad} = 13$  = 5 ·  $5 + \underline{\quad} = 14$  = 9