



The Great Space Cat Caper

Grade 2 math · Place value, Addition, Subtraction, Skip counting, Missing addends · Reading level grades 1-2

Detective: _____ Date: _____

Someone snuck into Space Station Meow-One and took the golden fish treat! Detective Astro-Cat needs your help. Solve the math clues to find out who did 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 space bandit is _____

Possible suspects

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

NAME	SPACESUIT GADGET	COSMIC GEAR	PAW HABIT	HELMET FUR	CAT TOY SHIELD
Chief Cleo	Jet Pack	Starlight Net	Right-pawed	Calico Fur	Feather Wand
Commander Luna	Jet Pack	Zero-G Collar	Right-pawed	Calico Fur	Squeaky Mouse
Commander Nova	Jet Pack	Lunar Whistle	Right-pawed	Black Fur	Squeaky Mouse
Ranger Milo	Moon Boots	Astro Ribbon	Right-pawed	Calico Fur	Squeaky Mouse
Agent Smokey	Moon Boots	Starlight Net	Right-pawed	Orange Fur	Catnip Ball
Pilot Penny	Moon Boots	Cosmic Bell	Left-pawed	Black Fur	Catnip Ball
Captain Stella	Laser Pointer	Zero-G Collar	Right-pawed	Orange Fur	Feather Wand
Officer Felix	Jet Pack	Starlight Net	Right-pawed	Calico Fur	Catnip Ball
Cadet Chloe	Laser Pointer	Astro Ribbon	Right-pawed	Calico Fur	Squeaky Mouse
Inspector Oliver	Moon Boots	Starlight Net	Left-pawed	Black Fur	Feather Wand
Pilot Socks	Grapple Paw	Lunar Whistle	Right-pawed	Calico Fur	Squeaky Mouse
Rookie Ziggy	Jet Pack	Zero-G Collar	Right-pawed	Orange Fur	Squeaky Mouse
Major Simba	Grapple Paw	Starlight Net	Right-pawed	Calico Fur	Squeaky Mouse
Dr Purr	Starlight Scope	Starlight Net	Right-pawed	Black Fur	Feather Wand
Scout Comet	Grapple Paw	Astro Ribbon	Right-pawed	Calico Fur	Feather Wand
Dr Barnaby	Laser Pointer	Zero-G Collar	Left-pawed	Black Fur	Feather Wand
Cadet Mittens	Starlight Scope	Astro Ribbon	Right-pawed	Calico Fur	Squeaky Mouse
Captain Buzz	Moon Boots	Starlight Net	Right-pawed	Calico Fur	Feather Wand
Agent Cosmo	Grapple Paw	Astro Ribbon	Left-pawed	Calico Fur	Feather Wand
Scout Orion	Starlight Scope	Starlight Net	Right-pawed	Calico Fur	Squeaky Mouse
Astronaut Boots	Jet Pack	Cosmic Bell	Left-pawed	Calico Fur	Squeaky Mouse

CLUE 1
Place value

Check the space monitor screen. Unscramble the place values to open the first locker.

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

T																T
96	58	19	35	93	34	34	71	93	45	72	42	19	73	45	42	96
			T					T								
51	73	19	96	58	19	71	73	96	30	42	30	93	17	17	42	45

What number has 9 tens and 6 ones?

→ **T**

What number has 4 tens and 2 ones?

→ **O**

What number has 1 ten and 9 ones?

→ **E**

What number has 3 tens and 4 ones?

→ **L**

What number has 1 ten and 7 ones?

→ **B**

What number has 4 tens and 5 ones?

→ **N**

What number has 7 tens and 1 one?

→ **A**

What number has 3 tens and 5 ones?

→ **V**

What number has 5 tens and 8 ones?

→ **H**

What number has 7 tens and 2 ones?

→ **D**

What number has 7 tens and 3 ones?

→ **S**

What number has 3 tens and 0 ones?

→ **R**

What number has 9 tens and 3 ones?

→ **I**

What number has 5 tens and 1 one?

→ **U**

Scratch space:

CLUE 2 Addition

Count the star treats in both boxes. Add them up to get the security key.

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

T									T				T	
27	44	32	23	79	23	83	32	51	27	58	32	26	27	78

				T							T							
21	53	68	44	27	83	78	46	83	21	53	43	27	43	32	78	21	45	93

$17 + 10 = \square \rightarrow$ T	$54 + 29 = \square \rightarrow$ P	$15 + 30 = \square \rightarrow$ B
$15 + 11 = \square \rightarrow$ F	$16 + 30 = \square \rightarrow$ W	$32 + 19 = \square \rightarrow$ C
$12 + 9 = \square \rightarrow$ R	$24 + 20 = \square \rightarrow$ H	$47 + 21 = \square \rightarrow$ G
$16 + 7 = \square \rightarrow$ S	$33 + 25 = \square \rightarrow$ L	$42 + 37 = \square \rightarrow$ U
$25 + 28 = \square \rightarrow$ I	$18 + 25 = \square \rightarrow$ N	$19 + 13 = \square \rightarrow$ E
$60 + 33 = \square \rightarrow$ Y	$23 + 55 = \square \rightarrow$ A	

Scratch space:

CLUE 3

Subtraction

The ship had a crate of space snacks. Subtract the missing ones to see the clue.

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

T																	
61	50	38	52	41	64	64	48	41	45	28	48	45	49	28	37	83	48
30	75	85	38	48	53	59	83	37	85	30	38						

$94 - 33 = \square \rightarrow \boxed{\text{T}}$

$113 - 28 = \square \rightarrow \boxed{\text{U}}$

$65 - 37 = \square \rightarrow \boxed{\text{R}}$

$63 - 18 = \square \rightarrow \boxed{\text{N}}$

$73 - 35 = \square \rightarrow \boxed{\text{E}}$

$55 - 3 = \square \rightarrow \boxed{\text{V}}$

$50 - 1 = \square \rightarrow \boxed{\text{F}}$

$53 - 16 = \square \rightarrow \boxed{\text{O}}$

$55 - 7 = \square \rightarrow \boxed{\text{A}}$

$79 - 15 = \square \rightarrow \boxed{\text{L}}$

$90 - 15 = \square \rightarrow \boxed{\text{Q}}$

$85 - 2 = \square \rightarrow \boxed{\text{M}}$

$73 - 20 = \square \rightarrow \boxed{\text{K}}$

$75 - 16 = \square \rightarrow \boxed{\text{Y}}$

$79 - 29 = \square \rightarrow \boxed{\text{H}}$

$59 - 29 = \square \rightarrow \boxed{\text{S}}$

$56 - 15 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 4 Skip counting

Follow the glowing paw prints along the moon path. Skip count by twos to catch up.

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

C				C													
22	24	6	12	22	30	20	10	40	60	24	70	20	30	10	27	35	30 27
26	9	120	9	120	6	80	120	26	100	6	24	70	70				

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 → **C**

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **L**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **N**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 → **D**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 → **R**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 → **F**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **H**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, __, 33, 36 → **O**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **U**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 → **M**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 → **S**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 → **E**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 → **W**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **G**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 → **T**

Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, 18 → **I**

Scratch space:

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

Find the missing battery power to fix the radar. Solve the missing number to get the last piece.

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:

$9 + \underline{\quad} = 17$

$5 + \underline{\quad} = 10$

$5 + \underline{\quad} = 12$

$3 + \underline{\quad} = 5$

$10 + \underline{\quad} = 11$

$3 + \underline{\quad} = 7$

$2 + \underline{\quad} = 12$

$10 + \underline{\quad} = 16$

$10 + \underline{\quad} = 21$

$9 + \underline{\quad} = 12$

$2 + \underline{\quad} = 11$

Step 2 - cross out the sentence with each answer:

1. The villain beamed down to the moon base, then dropped a shiny cosmic bell.
2. The villain beamed down to the moon base, then blew a loud lunar whistle.
3. The villain boosted past the launch pad, then activated the zero g collar.
4. The villain boosted past the launch pad, then swung away on a starlight net.
5. The villain boosted past the launch pad, then blew a loud lunar whistle.
6. The villain zapped the main solar panel, then swung away on a starlight net.
7. The villain grabbed the astro treat bag, then hid behind the space rover.
8. The villain beamed down to the moon base, then swung away on a starlight net.
9. The villain grabbed the astro treat bag, then activated the zero g collar.
10. The villain beamed down to the moon base, then activated the zero g collar.
11. The villain boosted past the launch pad, then hid behind the space rover.
12. The villain grabbed the astro treat bag, then swung away on a starlight net.

Answer Key

The Great Space Cat Caper

Culprit: Major Simba

Grapple Paw · Starlight Net · Right-pawed · Calico Fur · Squeaky Mouse

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE THE ASTRO RIBBON"

What number has 9 tens and 6 ones? = 96 (T) · What number has 4 tens and 2 ones? = 42 (O) · What number has 1 ten and 9 ones? = 19 (E) · What number has 3 tens and 4 ones? = 34 (L) · What number has 1 ten and 7 ones? = 17 (B) · What number has 4 tens and 5 ones? = 45 (N) · What number has 7 tens and 1 one? = 71 (A) · What number has 3 tens and 5 ones? = 35 (V) · What number has 5 tens and 8 ones? = 58 (H) · What number has 7 tens and 2 ones? = 72 (D) · What number has 7 tens and 3 ones? = 73 (S) · What number has 3 tens and 0 ones? = 30 (R) · What number has 9 tens and 3 ones? = 93 (I) · What number has 5 tens and 1 one? = 51 (U)

Clue 2 (Addition): "THE SUSPECT LEFT A RIGHT PAW PRINT NEARBY"

$17 + 10 = 27$ (T) · $54 + 29 = 83$ (P) · $15 + 30 = 45$ (B) · $15 + 11 = 26$ (F) · $16 + 30 = 46$ (W) · $32 + 19 = 51$ (C) · $12 + 9 = 21$ (R) · $24 + 20 = 44$ (H) · $47 + 21 = 68$ (G) · $16 + 7 = 23$ (S) · $33 + 25 = 58$ (L) · $42 + 37 = 79$ (U) · $25 + 28 = 53$ (I) · $18 + 25 = 43$ (N) · $19 + 13 = 32$ (E) · $60 + 33 = 93$ (Y) · $23 + 55 = 78$ (A)

Clue 3 (Subtraction): "THE VILLAIN RAN FROM A SQUEAKY MOUSE"

$94 - 33 = 61$ (T) · $113 - 28 = 85$ (U) · $65 - 37 = 28$ (R) · $63 - 18 = 45$ (N) · $73 - 35 = 38$ (E) · $55 - 3 = 52$ (V) · $50 - 1 = 49$ (F) · $53 - 16 = 37$ (O) · $55 - 7 = 48$ (A) · $79 - 15 = 64$ (L) · $90 - 15 = 75$ (Q) · $85 - 2 = 83$ (M) · $73 - 20 = 53$ (K) · $75 - 16 = 59$ (Y) · $79 - 29 = 50$ (H) · $59 - 29 = 30$ (S) · $56 - 15 = 41$ (I)

Clue 4 (Skip counting): "CALICO FUR WAS FOUND ON THE HELMET GLASS"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (C) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 = 6 (L) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (N) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 = 40 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 = 24 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 = 20 (F) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, __, 33, 36 = 30 (O) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (M) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (W) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, 18 = 12 (I)

Clue 5 (Missing addends): surviving statement is box 12 → Major Simba

$9 + \underline{\quad} = 17 = 8$ · $5 + \underline{\quad} = 10 = 5$ · $5 + \underline{\quad} = 12 = 7$ · $3 + \underline{\quad} = 5 = 2$ · $10 + \underline{\quad} = 11 = 1$ · $3 + \underline{\quad} = 7 = 4$ · $2 + \underline{\quad} = 12 = 10$ · $10 + \underline{\quad} = 16 = 6$ · $10 + \underline{\quad} = 21 = 11$ · $9 + \underline{\quad} = 12 = 3$ · $2 + \underline{\quad} = 11 = 9$