The Great Space Station Meow Mystery

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

Detective: _____ **Date:** _____

Someone snuck into Space Station Meow and took the golden fish trophy! Chief Astro-Vet Mittens needs your help. Solve the space math puzzles to collect clues and catch the cosmic sneak!

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 Cosmic Sneak is _____

Possible suspects

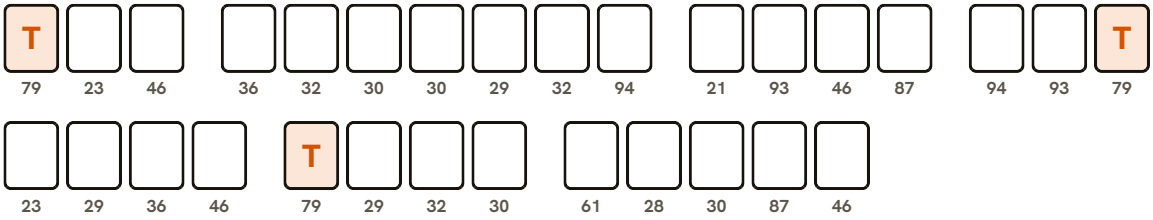
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SPACE GEAR	ASTRO SKILL	PAW LEAD	FUR TYPE	DISTRACTION
Astronaut Felix	Laser Helmet	Star Leap	Right Pawed	Fluffy Calico Fur	Laser Pointer
Pluto Patch	Radar Whiskers	Tail Pulse	Left Pawed	Sleek Black Fur	Catnip Snack
Venus Velvet	Jetpack Boots	Tail Pulse	Right Pawed	Orange Tabby Fur	Catnip Snack
Zipping Ziggy	Radar Whiskers	Nebula Purr	Right Pawed	Sleek Black Fur	Catnip Snack
Starlight Boots	Jetpack Boots	Zero G Hover	Left Pawed	Orange Tabby Fur	Laser Pointer
Nova Nibbles	Radar Whiskers	Nebula Purr	Left Pawed	Sleek Black Fur	Squeaky Mouse
Orion Ollie	Radar Whiskers	Nebula Purr	Left Pawed	Orange Tabby Fur	Laser Pointer
Luna Tabby	Solar Suit	Meow Comms	Left Pawed	Fluffy Calico Fur	Squeaky Mouse
Radar Rosie	Gravity Gloves	Star Leap	Left Pawed	Orange Tabby Fur	Laser Pointer
Commander Paws	Jetpack Boots	Zero G Hover	Left Pawed	Sleek Black Fur	Catnip Snack
Nebula Nala	Solar Suit	Zero G Hover	Left Pawed	Sleek Black Fur	Squeaky Mouse
Orbit Oreo	Radar Whiskers	Meow Comms	Left Pawed	Sleek Black Fur	Laser Pointer
Astro Alley	Jetpack Boots	Tail Pulse	Left Pawed	Orange Tabby Fur	Laser Pointer
Officer Purr	Jetpack Boots	Tail Pulse	Right Pawed	Orange Tabby Fur	Laser Pointer
Galaxy Garfield	Jetpack Boots	Nebula Purr	Left Pawed	Fluffy Calico Fur	Laser Pointer
Pixel Paw	Gravity Gloves	Nebula Purr	Right Pawed	Sleek Black Fur	Laser Pointer
Saturn Smokey	Jetpack Boots	Star Leap	Right Pawed	Fluffy Calico Fur	Laser Pointer
Cosmo Calico	Solar Suit	Nebula Purr	Right Pawed	Fluffy Calico Fur	Catnip Snack
Apollo Boots	Radar Whiskers	Zero G Hover	Left Pawed	Orange Tabby Fur	Catnip Snack
Comet Cleo	Solar Suit	Zero G Hover	Right Pawed	Orange Tabby Fur	Laser Pointer
Captain Whiskers	Solar Suit	Nebula Purr	Left Pawed	Orange Tabby Fur	Laser Pointer

CLUE 1 Addition

Count the shiny moon rocks collected by the Paw Patrol to decode the first lead.

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



23 + 56 = ☐ → T

41 + 46 = ☐ → S

11 + 25 = ☐ → V

18 + 10 = ☐ → U

17 + 12 = ☐ → A

22 + 10 = ☐ → I

19 + 27 = ☐ → E

7 + 16 = ☐ → H

38 + 23 = ☐ → P

13 + 17 = ☐ → L

49 + 45 = ☐ → N

6 + 15 = ☐ → D

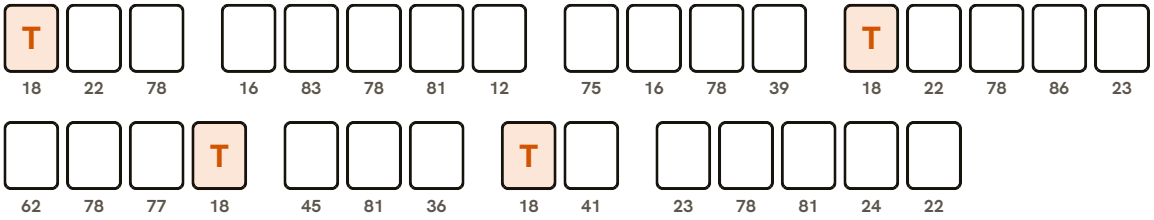
38 + 55 = ☐ → O

Scratch space:

CLUE 2 Subtraction

Subtract the broken glow sticks from the crate to see what evidence remains.

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



40 - 22 = ☐ → T

107 - 29 = ☐ → E

76 - 35 = ☐ → O

85 - 40 = ☐ → P

93 - 18 = ☐ → U

46 - 7 = ☐ → D

39 - 3 = ☐ → W

39 - 16 = ☐ → R

32 - 8 = ☐ → C

123 - 37 = ☐ → I

89 - 27 = ☐ → L

41 - 19 = ☐ → H

82 - 5 = ☐ → F

56 - 40 = ☐ → S

40 - 28 = ☐ → K

105 - 22 = ☐ → N

114 - 33 = ☐ → A

Scratch space:

CLUE 3 Word problems

Solve this space story problem to reveal a secret note left in the shuttle.

Solve each problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with

L							I	N	T		
21	13	11	36	16	40	22				36	16

.

There were 29 astro kibble. 8 were used up. How many astro kibble are left?

Answer: ☐ → **L**

Cadet Boots lined up 4 rows of 4 space mice. How many space mice in all?

Answer: ☐ → **R**

Cadet Boots found 2 space mice yesterday and 20 more today. How many space mice in all?

Answer: ☐ → **O**

There were 15 astro kibble. 2 were used up. How many astro kibble are left?

Answer: ☐ → **A**

There were 39 astro kibble. 3 were used up. How many astro kibble are left?

Answer: ☐ → **E**

There were 14 astro kibble. 3 were used up. How many astro kibble are left?

Answer: ☐ → **S**

Cadet Boots lined up 5 rows of 8 space mice. How many space mice in all?

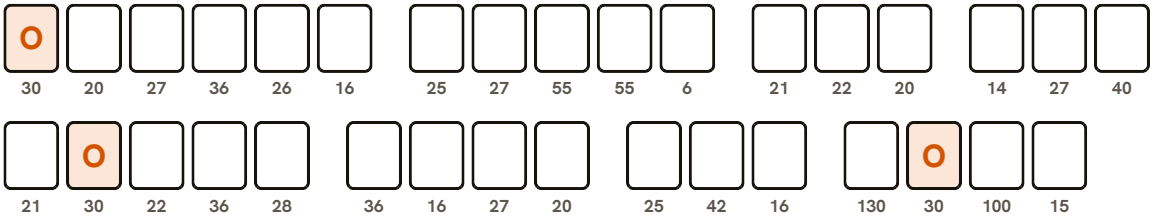
Answer: ☐ → **P**

Scratch space:

CLUE 4 Skip counting

Skip count by twos along the launchpad path to unlock the security log.

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



Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, ___, 35, 40 ☐ → O

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, ___, 30, 35 ☐ → T

Skip-count by 5s. Fill the blank: 5, 10, ___, 20, 25 ☐ → K

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, ___, 140, 150 ☐ → L

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 ☐ → E

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, ___, 45, 48 ☐ → H

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 ☐ → F

Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 ☐ → Y

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 ☐ → D

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, ___, 110, 120 ☐ → C

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 ☐ → W

Skip-count by 5s. Fill the blank: 5, 10, 15, ___, 25, 30 ☐ → **R**

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 ☐ → **B**

Skip-count by 10s. Fill the blank: 10, 20, 30, ___, 50, 60 ☐ → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 ☐ → **N**

Scratch space:

CLUE 5 Missing addends - the last clue

Find the missing number in the airlock code to get the final 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:

9 + ___ = 11 ☐ | 9 + ___ = 21 ☐ | 5 + ___ = 11 ☐ | 10 + ___ = 19 ☐

8 + ___ = 13 ☐ | 2 + ___ = 9 ☐ | 6 + ___ = 7 ☐ | 2 + ___ = 5 ☐ | 1 + ___ = 9 ☐

4 + ___ = 8 ☐ | 4 + ___ = 15 ☐

Step 2 - cross out the sentence with each answer:

1. The villain strapped on jetpack boots, then chatted on meow comms.
2. The villain powered up a solar suit, then soothed the crew with a nebula purr.
3. The villain twitched radar whiskers, then floated with zero g hover.
4. The villain strapped on jetpack boots, then soothed the crew with a nebula purr.
5. The villain switched on a laser helmet, then floated with zero g hover.
6. The villain twitched radar whiskers, then soothed the crew with a nebula purr.
7. The villain powered up a solar suit, then sent signals with a tail pulse.
8. The villain switched on a laser helmet, then jumped high with a star leap.
9. The villain pulled on gravity gloves, then chatted on meow comms.
10. The villain pulled on gravity gloves, then jumped high with a star leap.
11. The villain strapped on jetpack boots, then sent signals with a tail pulse.
12. The villain strapped on jetpack boots, then floated with zero g hover.

TEACHER / PARENT

Answer Key

The Great Space Station Meow Mystery

Culprit: Radar Rosie

Gravity Gloves · Star Leap · Left Pawed · Orange Tabby Fur · Laser Pointer

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT HAVE TAIL PULSE"

23 + 56 = 79 (T) · 41 + 46 = 87 (S) · 11 + 25 = 36 (V) · 18 + 10 = 28 (U) · 17 + 12 = 29 (A) · 22 + 10 = 32 (I) · 19 + 27 = 46 (E) · 7 + 16 = 23 (H) · 38 + 23 = 61 (P) · 13 + 17 = 30 (L) · 49 + 45 = 94 (N) · 6 + 15 = 21 (D) · 38 + 55 = 93 (O)

Clue 2 (Subtraction): "THE SNEAK USED THEIR LEFT PAW TO REACH"

40 - 22 = 18 (T) · 107 - 29 = 78 (E) · 76 - 35 = 41 (O) · 85 - 40 = 45 (P) · 93 - 18 = 75 (U) · 46 - 7 = 39 (D) · 39 - 3 = 36 (W) · 39 - 16 = 23 (R) · 32 - 8 = 24 (C) · 123 - 37 = 86 (I) · 89 - 27 = 62 (L) · 41 - 19 = 22 (H) · 82 - 5 = 77 (F) · 56 - 40 = 16 (S) · 40 - 28 = 12 (K) · 105 - 22 = 83 (N) · 114 - 33 = 81 (A)

Clue 3 (Word problems): "LASER POINTER"

There were 29 astro kibble. 8 were used up. How many astro kibble are left? = 21 (L) · Cadet Boots lined up 4 rows of 4 space mice. How many space mice in all? = 16 (R) · Cadet Boots found 2 space mice yesterday and 20 more today. How many space mice in all? = 22 (O) · There were 15 astro kibble. 2 were used up. How many astro kibble are left? = 13 (A) · There were 39 astro kibble. 3 were used up. How many astro kibble are left? = 36 (E) · There were 14 astro kibble. 3 were used up. How many astro kibble are left? = 11 (S) · Cadet Boots lined up 5 rows of 8 space mice. How many space mice in all? = 40 (P)

Clue 4 (Skip counting): "ORANGE TABBY FUR WAS FOUND NEAR THE LOCK"

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, ___, 35, 40 = 30 (O) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ___, 24, 26 = 22 (U) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, ___, 30, 35 = 25 (T) · Skip-count by 5s. Fill the blank: 5, 10, ___, 20, 25 = 15 (K) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, ___, 140, 150 = 130 (L) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 = 16 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, ___, 45, 48 = 42 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 = 21 (F) · Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 = 6 (Y) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 = 28 (D) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, ___, 110, 120 = 100 (C) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 = 14 (W) · Skip-count by 5s. Fill the blank: 5, 10, 15, ___, 25, 30 = 20 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 = 27 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 = 55 (B) · Skip-count by 10s. Fill the blank: 10, 20, 30, ___, 50, 60 = 40 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 = 36 (N)

Clue 5 (Missing addends): surviving statement is box 10 → Radar Rosie

9 + ___ = 11 = 2 · 9 + ___ = 21 = 12 · 5 + ___ = 11 = 6 · 10 + ___ = 19 = 9 · 8 + ___ = 13 = 5 · 2 + ___ = 9 = 7 · 6 + ___ = 7 = 1 · 2 + ___ = 5 = 3 · 1 + ___ = 9 = 8 · 4 + ___ = 8 = 4 · 4 + ___ = 15 = 11