



The Cosmic Cape Caper

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

Detective: _____ Date: _____

A sneaky Astro-Thief took the Golden Star Trophy from the dome! Captain Sally needs your help to track them down before the shuttle blasts off. Let us look for clues!

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 Astro-Thief is _____

Possible suspects

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

NAME	ASTRO-GEAR	SUPER-SUIT TOOL	LUCKY HAND	HELMET GLOW COLOR	FEAR
Kalpana	fast rocket pack	bright plasma light	left handed	hot pink glow	bright sunlight
Eileen	noisy space scooter	bright plasma light	right handed	bright blue glow	loud space music
Pete	fast rocket pack	hot laser tool	left handed	neon green glow	sticky bubble gum
Alan	noisy space scooter	glowing radar watch	right handed	hot pink glow	loud space music
Buzz	fast rocket pack	bright plasma light	right handed	bright blue glow	loud space music
Fred	noisy space scooter	hot laser tool	right handed	hot pink glow	loud space music
Jim	fast rocket pack	bright plasma light	left handed	neon green glow	loud space music
Valentina	bumpy bubble rover	strong magnet glove	left handed	bright blue glow	sticky bubble gum
Sally	bumpy bubble rover	strong magnet glove	right handed	bright blue glow	loud space music
Neil	silent star glider	glowing radar watch	right handed	bright blue glow	loud space music
Jack	noisy space scooter	strong magnet glove	left handed	bright blue glow	loud space music
Guy	fast rocket pack	glowing radar watch	right handed	bright blue glow	sticky bubble gum
Ed	bumpy bubble rover	glowing radar watch	left handed	bright blue glow	loud space music
Scott	bumpy bubble rover	hot laser tool	right handed	neon green glow	loud space music
Michael	silent star glider	glowing radar watch	right handed	bright blue glow	bright sunlight
Chris	fast rocket pack	bright plasma light	left handed	bright blue glow	loud space music
Yuri	heavy gravity boots	fancy shrink beam	left handed	hot pink glow	bright sunlight
Alexei	silent star glider	bright plasma light	left handed	bright blue glow	loud space music
Gus	bumpy bubble rover	hot laser tool	right handed	neon green glow	sticky bubble gum
Gene	bumpy bubble rover	fancy shrink beam	left handed	bright blue glow	loud space music
John	fast rocket pack	fancy shrink beam	right handed	bright blue glow	loud space music

CLUE 1 Addition

We count the star fuel cans. We add two more cans. The total reveals a hint!

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

T 19 4 15	T 19 4 20 15 2	5 10 15 16	17 10 19	13 16 15
T 19 4 15	16 4 3 20 17 18	14 15 8 6		

$12 + 7 = \square \rightarrow$ T	$5 + 3 = \square \rightarrow$ A	$1 + 1 = \square \rightarrow$ F	$1 + 2 = \square \rightarrow$ R
$9 + 7 = \square \rightarrow$ S	$8 + 6 = \square \rightarrow$ B	$4 + 2 = \square \rightarrow$ M	$4 + 6 = \square \rightarrow$ O
$7 + 8 = \square \rightarrow$ E	$8 + 12 = \square \rightarrow$ I	$3 + 2 = \square \rightarrow$ D	
$3 + 10 = \square \rightarrow$ U	$6 + 11 = \square \rightarrow$ N	$13 + 5 = \square \rightarrow$ K	
$3 + 1 = \square \rightarrow$ H			

Scratch space:

CLUE 2

Subtraction

The radar screen loses some dots. We subtract the lost dots to read the screen!

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

T								T											
9	18	14	12	7	13	18	9	18	3	6	4	14	4	13	1	2	10	14	
				T															
8	12	7	6	9	15	11	14	12	14	15	14	14	6						

$15 - 6 =$

→

T

$8 - 2 =$

→

N

$17 - 9 =$

→

P

$18 - 5 =$

→

G

$10 - 7 =$

→

A

$8 - 6 =$

→

O

$18 - 4 =$

→

E

$20 - 2 =$

→

H

$13 - 1 =$

→

R

$15 - 4 =$

→

W

$8 - 4 =$

→

D

$11 - 4 =$

→

I

$4 - 3 =$

→

L

$16 - 6 =$

→

V

$17 - 2 =$

→

S

Scratch space:

CLUE 3 Skip counting

The rocket lights flash in a pattern of twos. Count by twos to find the code!

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

F				F												
40	16	90	18	40	55	30	24	16	30	36	18	10	39	130	50	90

24	36	10	15	50

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

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

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 → **P**

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **I**

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

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, __, 26, 28 → **M**

Scratch space:

CLUE 4 Place value

We look at the computer screen. It shows tens and ones to unlock the vault!

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

B						B											
99	78	92	37	77	59	99	82	41	43	37	82	65	30	82	43	98	59

B					
99	43	77	92	22	17

What number has 9 tens and 9 ones? → **B**

What number has 3 tens and 7 ones? → **G**

What number has 2 tens and 2 ones? → **N**

What number has 7 tens and 8 ones? → **R**

What number has 3 tens and 0 ones? → **W**

What number has 8 tens and 2 ones? → **L**

What number has 4 tens and 3 ones? → **E**

What number has 7 tens and 7 ones? → **H**

What number has 9 tens and 2 ones? → **I**

What number has 1 ten and 7 ones? → **D**

What number has 4 tens and 1 one? → **U**

What number has 5 tens and 9 ones? → **T**

What number has 9 tens and 8 ones? → **F**

What number has 6 tens and 5 ones? → **O**

Scratch space:

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

We need ten space tools but only have six. Find the missing number to open the door!

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:

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

$9 + \underline{\quad} = 19$

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

$5 + \underline{\quad} = 8$

$1 + \underline{\quad} = 13$

$10 + \underline{\quad} = 14$

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

$8 + \underline{\quad} = 15$

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

$6 + \underline{\quad} = 12$

$7 + \underline{\quad} = 18$

Step 2 - cross out the sentence with each answer:

1. The villain zooms off with a fast rocket pack, then zaps the lock with a hot laser tool.
2. The villain rolls past the base in a bumpy bubble rover, then grabs the metal with a strong magnet glove.
3. The villain soars through the air on a silent star glider, then grabs the metal with a strong magnet glove.
4. The villain soars through the air on a silent star glider, then makes things tiny with a fancy shrink beam.
5. The villain soars through the air on a silent star glider, then zaps the lock with a hot laser tool.
6. The villain clomps around in heavy gravity boots, then checks the map with a glowing radar watch.
7. The villain clomps around in heavy gravity boots, then zaps the lock with a hot laser tool.
8. The villain soars through the air on a silent star glider, then checks the map with a glowing radar watch.
9. The villain zooms off with a fast rocket pack, then lights up the dark with a bright plasma light.
10. The villain rides away on a noisy space scooter, then lights up the dark with a bright plasma light.
11. The villain rides away on a noisy space scooter, then checks the map with a glowing radar watch.
12. The villain rolls past the base in a bumpy bubble rover, then checks the map with a glowing radar watch.

Answer Key

The Cosmic Cape Caper

Culprit: Sally

bumpy bubble rover · strong magnet glove · right handed · bright blue glow · loud space music

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT USE THE SHRINK BEAM"

$12 + 7 = 19$ (T) · $5 + 3 = 8$ (A) · $1 + 1 = 2$ (F) · $1 + 2 = 3$ (R) · $9 + 7 = 16$ (S) · $8 + 6 = 14$ (B) · $4 + 2 = 6$ (M) · $4 + 6 = 10$ (O) · $7 + 8 = 15$ (E) · $8 + 12 = 20$ (I) · $3 + 2 = 5$ (D) · $3 + 10 = 13$ (U) · $6 + 11 = 17$ (N) · $13 + 5 = 18$ (K) · $3 + 1 = 4$ (H)

Clue 2 (Subtraction): "THE RIGHT HANDED GLOVE PRINTS WERE SEEN"

$15 - 6 = 9$ (T) · $8 - 2 = 6$ (N) · $17 - 9 = 8$ (P) · $18 - 5 = 13$ (G) · $10 - 7 = 3$ (A) · $8 - 6 = 2$ (O) · $18 - 4 = 14$ (E) · $20 - 2 = 18$ (H) · $13 - 1 = 12$ (R) · $15 - 4 = 11$ (W) · $8 - 4 = 4$ (D) · $11 - 4 = 7$ (I) · $4 - 3 = 1$ (L) · $16 - 6 = 10$ (V) · $17 - 2 = 15$ (S)

Clue 3 (Skip counting): "FLED FROM LOUD SPACE MUSIC"

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

Clue 4 (Place value): "BRIGHT BLUE GLOW LEFT BEHIND"

What number has 9 tens and 9 ones? = 99 (B) · What number has 3 tens and 7 ones? = 37 (G) · What number has 2 tens and 2 ones? = 22 (N) · What number has 7 tens and 8 ones? = 78 (R) · What number has 3 tens and 0 ones? = 30 (W) · What number has 8 tens and 2 ones? = 82 (L) · What number has 4 tens and 3 ones? = 43 (E) · What number has 7 tens and 7 ones? = 77 (H) · What number has 9 tens and 2 ones? = 92 (I) · What number has 1 ten and 7 ones? = 17 (D) · What number has 4 tens and 1 one? = 41 (U) · What number has 5 tens and 9 ones? = 59 (T) · What number has 9 tens and 8 ones? = 98 (F) · What number has 6 tens and 5 ones? = 65 (O)

Clue 5 (Missing addends): surviving statement is box 2 → Sally

$2 + \underline{\quad} = 11 = 9$ · $9 + \underline{\quad} = 19 = 10$ · $9 + \underline{\quad} = 17 = 8$ · $5 + \underline{\quad} = 8 = 3$ · $1 + \underline{\quad} = 13 = 12$ · $10 + \underline{\quad} = 14 = 4$ · $8 + \underline{\quad} = 13 = 5$ · $8 + \underline{\quad} = 15 = 7$ · $2 + \underline{\quad} = 3 = 1$ · $6 + \underline{\quad} = 12 = 6$ · $7 + \underline{\quad} = 18 = 11$