



The Solar System Satellite Heist

Grade 2 math · Addition, Subtraction, Place value, Skip counting, Missing addends · Reading level grades 3-4

Detective: _____ Date: _____

Someone snatched the golden telescope lens from the Starlight Space Station! The Chief Astronomer needs your math skills to narrow down the suspects.

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 Hijacker is _____

Possible suspects

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

NAME	PRIMARY GEAR	SECONDARY GADGET	DOMINANT HAND	SPACE SUIT HAIR	SECRET WEAKNESS
Marshal Tycho	Plasma Torch	Orbital Beacon	Right Handed	Bright Blue Hair	Bright Flashlight
Agent Polaris	Starlight Shield	Comet Scanner	Right Handed	Neon Silver Hair	Loud Siren
Chief Kepler	Solar Laser	Nebula Cloak	Right Handed	Dark Violet Hair	Bright Flashlight
Officer Orion	Asteroid Net	Nebula Cloak	Right Handed	Bright Blue Hair	Magnetic Field
Captain Nova	Starlight Shield	Meteor Cannon	Left Handed	Bright Blue Hair	Magnetic Field
Professor Comet	Solar Laser	Meteor Cannon	Right Handed	Neon Silver Hair	Bright Flashlight
Captain Atlas	Plasma Torch	Rover Jetpack	Right Handed	Dark Violet Hair	Bright Flashlight
Tech Pulsar	Asteroid Net	Rover Jetpack	Right Handed	Dark Violet Hair	Bright Flashlight
Officer Celeste	Plasma Torch	Nebula Cloak	Left Handed	Neon Silver Hair	Bright Flashlight
Major Eclipse	Plasma Torch	Rover Jetpack	Right Handed	Neon Silver Hair	Bright Flashlight
Specialist Titan	Gravity Boots	Orbital Beacon	Right Handed	Bright Blue Hair	Magnetic Field
Dr Cosmos	Plasma Torch	Orbital Beacon	Right Handed	Bright Blue Hair	Magnetic Field
Agent Rigel	Starlight Shield	Rover Jetpack	Right Handed	Bright Blue Hair	Magnetic Field
Cadet Stella	Asteroid Net	Nebula Cloak	Left Handed	Dark Violet Hair	Magnetic Field
Pilot Vega	Starlight Shield	Rover Jetpack	Right Handed	Neon Silver Hair	Loud Siren
Ranger Zenith	Gravity Boots	Meteor Cannon	Right Handed	Bright Blue Hair	Magnetic Field
Commander Vance	Gravity Boots	Nebula Cloak	Right Handed	Neon Silver Hair	Bright Flashlight
Scout Carina	Plasma Torch	Meteor Cannon	Right Handed	Neon Silver Hair	Magnetic Field
Dr Halley	Asteroid Net	Orbital Beacon	Left Handed	Bright Blue Hair	Magnetic Field
Navigator Sol	Solar Laser	Orbital Beacon	Right Handed	Dark Violet Hair	Magnetic Field
Scout Lyra	Asteroid Net	Orbital Beacon	Left Handed	Bright Blue Hair	Loud Siren

CLUE 1 Addition

Astronaut Leo totaled up the glowing solar panels to unlock the main computer drive.

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

T										T								T
27	95	24	77	71	37	74	51	79	27	36	35	24	29	82	35	27		

95	44	39	24	44	82	24	61	71	37	44	77	37	35	44	38			

$17 + 10 = \square \rightarrow$ T	$55 + 24 = \square \rightarrow$ I	$25 + 52 = \square \rightarrow$ C
$41 + 33 = \square \rightarrow$ P	$24 + 37 = \square \rightarrow$ B	$21 + 16 = \square \rightarrow$ L
$19 + 10 = \square \rightarrow$ S	$54 + 28 = \square \rightarrow$ N	$27 + 11 = \square \rightarrow$ K
$17 + 7 = \square \rightarrow$ E	$31 + 13 = \square \rightarrow$ A	$25 + 26 = \square \rightarrow$ R
$13 + 26 = \square \rightarrow$ V	$15 + 20 = \square \rightarrow$ O	$28 + 43 = \square \rightarrow$ U
$15 + 21 = \square \rightarrow$ D	$63 + 32 = \square \rightarrow$ H	

Scratch space:

CLUE 2

Subtraction

The team subtracted the damaged space probes from the launch list to read the next report.

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

W									W								
47	66	12	55	60	24	24	24	23	47	12	67	60	37	41	24	60	
12	67	60	66	72	72	66	26	67	12	67	23	55	68				

$85 - 38 = \square \rightarrow \boxed{\text{W}}$

$44 - 18 = \square \rightarrow \boxed{\text{G}}$

$87 - 32 = \square \rightarrow \boxed{\text{N}}$

$64 - 40 = \square \rightarrow \boxed{\text{S}}$

$59 - 18 = \square \rightarrow \boxed{\text{U}}$

$81 - 14 = \square \rightarrow \boxed{\text{H}}$

$44 - 32 = \square \rightarrow \boxed{\text{T}}$

$65 - 5 = \square \rightarrow \boxed{\text{E}}$

$94 - 26 = \square \rightarrow \boxed{\text{D}}$

$39 - 16 = \square \rightarrow \boxed{\text{A}}$

$97 - 25 = \square \rightarrow \boxed{\text{R}}$

$76 - 39 = \square \rightarrow \boxed{\text{M}}$

$105 - 39 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 3 Place value

Analyzing the place value display on the satellite monitor revealed a hidden message code.

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

A		A											
68	85	68	46	62	56	24	21	57	22	21	56	36	92

		A												
24	67	68	32	32	56	92	24	38	56	57	91	36	32	67

What number has 6 tens and 8 ones? → **A**

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

What number has 2 tens and 1 one? → **I**

What number has 2 tens and 4 ones? → **T**

What number has 8 tens and 5 ones? → **M**

What number has 3 tens and 2 ones? → **P**

What number has 3 tens and 6 ones? → **L**

What number has 9 tens and 1 one? → **U**

What number has 5 tens and 7 ones? → **C**

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

What number has 4 tens and 6 ones? → **G**

What number has 6 tens and 2 ones? → **N**

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

What number has 3 tens and 8 ones? → **H**

What number has 6 tens and 7 ones? → **R**

Scratch space:

CLUE 4 Skip counting

Counting the rows of telescope lenses by fives provided the safe combination.

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

B						B										
30	28	80	6	45	16	30	50	70	40	45	60	80	28	130	60	33
20	39	70	27	55	60	16	16	45	40	33	15	40	27	40		

Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 → **B**

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **H**

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

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

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

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

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

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

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

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

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

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

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 → **S**

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

Scratch space:

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

Solving the missing addend on the oxygen reserve meter opened the secret lab 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:

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

$9 + \underline{\quad} = 14$

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

$5 + \underline{\quad} = 11$

$10 + \underline{\quad} = 22$

$3 + \underline{\quad} = 4$

$9 + \underline{\quad} = 16$

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

$3 + \underline{\quad} = 12$

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

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

Step 2 - cross out the sentence with each answer:

1. The villain scooped the prize in an asteroid net, then fled under cover of a nebula cloak.
2. The villain blocked the guards with a starlight shield, then blasted through rocks with a meteor cannon.
3. The villain blocked the guards with a starlight shield, then escaped using a rover jetpack.
4. The villain cut the doors with a plasma torch, then guided the ship with an orbital beacon.
5. The villain marched inside with gravity boots, then guided the ship with an orbital beacon.
6. The villain blocked the guards with a starlight shield, then guided the ship with an orbital beacon.
7. The villain zapped the vault with a solar laser, then blasted through rocks with a meteor cannon.
8. The villain marched inside with gravity boots, then blasted through rocks with a meteor cannon.
9. The villain scooped the prize in an asteroid net, then blasted through rocks with a meteor cannon.
10. The villain cut the doors with a plasma torch, then escaped using a rover jetpack.
11. The villain blocked the guards with a starlight shield, then fled under cover of a nebula cloak.
12. The villain blocked the guards with a starlight shield, then tracked the route with a comet scanner.

Answer Key

The Solar System Satellite Heist

Culprit: Ranger Zenith

Gravity Boots · Meteor Cannon · Right Handed · Bright Blue Hair · Magnetic Field

Trail: Start 21 → Clue 1 16 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE CULPRIT DOES NOT HAVE A NEBULA CLOAK"

$17 + 10 = 27$ (T) · $55 + 24 = 79$ (I) · $25 + 52 = 77$ (C) · $41 + 33 = 74$ (P) · $24 + 37 = 61$ (B) · $21 + 16 = 37$ (L) · $19 + 10 = 29$ (S) · $54 + 28 = 82$ (N) · $27 + 11 = 38$ (K) · $17 + 7 = 24$ (E) · $31 + 13 = 44$ (A) · $25 + 26 = 51$ (R) · $13 + 26 = 39$ (V) · $15 + 20 = 35$ (O) · $28 + 43 = 71$ (U) · $15 + 21 = 36$ (D) · $63 + 32 = 95$ (H)

Clue 2 (Subtraction): "WITNESS SAW THEM USE THEIR RIGHT HAND"

$85 - 38 = 47$ (W) · $44 - 18 = 26$ (G) · $87 - 32 = 55$ (N) · $64 - 40 = 24$ (S) · $59 - 18 = 41$ (U) · $81 - 14 = 67$ (H) · $44 - 32 = 12$ (T) · $65 - 5 = 60$ (E) · $94 - 26 = 68$ (D) · $39 - 16 = 23$ (A) · $97 - 25 = 72$ (R) · $76 - 39 = 37$ (M) · $105 - 39 = 66$ (I)

Clue 3 (Place value): "A MAGNETIC FIELD TRAPPED THE CULPRIT"

What number has 6 tens and 8 ones? = 68 (A) · What number has 5 tens and 6 ones? = 56 (E) · What number has 2 tens and 1 one? = 21 (I) · What number has 2 tens and 4 ones? = 24 (T) · What number has 8 tens and 5 ones? = 85 (M) · What number has 3 tens and 2 ones? = 32 (P) · What number has 3 tens and 6 ones? = 36 (L) · What number has 9 tens and 1 one? = 91 (U) · What number has 5 tens and 7 ones? = 57 (C) · What number has 2 tens and 2 ones? = 22 (F) · What number has 4 tens and 6 ones? = 46 (G) · What number has 6 tens and 2 ones? = 62 (N) · What number has 9 tens and 2 ones? = 92 (D) · What number has 3 tens and 8 ones? = 38 (H) · What number has 6 tens and 7 ones? = 67 (R)

Clue 4 (Skip counting): "BRIGHT BLUE HAIR WAS FOUND AT THE SCENE"

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

Clue 5 (Missing addends): surviving statement is box 8 → Ranger Zenith

$4 + \underline{\quad} = 8 = 4$ · $9 + \underline{\quad} = 14 = 5$ · $3 + \underline{\quad} = 6 = 3$ · $5 + \underline{\quad} = 11 = 6$ · $10 + \underline{\quad} = 22 = 12$ · $3 + \underline{\quad} = 4 = 1$ · $9 + \underline{\quad} = 16 = 7$ · $6 + \underline{\quad} = 8 = 2$ · $3 + \underline{\quad} = 12 = 9$ · $7 + \underline{\quad} = 18 = 11$ · $10 + \underline{\quad} = 20 = 10$