The Starlight Station Mystery

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

Detective: _____ **Date:** _____

Someone snuck into the Starlight Space Station and hid the space core! Help the crew solve the math clues to find the villain.

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 Bandit is _____

Possible suspects

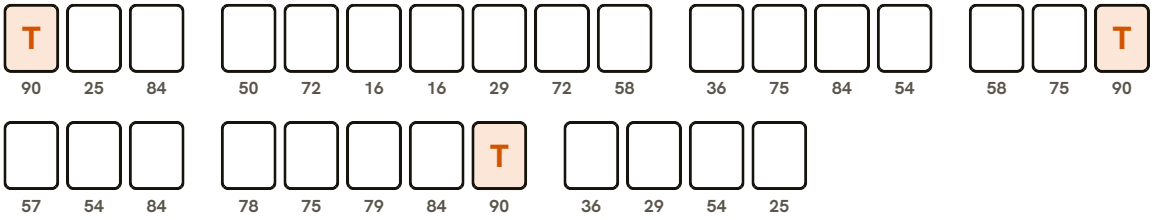
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	MAIN TOOL	GEAR ITEM	HAND USED	HELMET COLOR	WEAKNESS
Cadet Kai	Laser Beam	Comet Dash	Left Handed	Blue Helmet	Loud Whistle
Cadet Mia	Rocket Boost	Cosmic Magnet	Left Handed	Blue Helmet	Water Spray
Cadet Maya	Zero Gravity	Nebula Cloud	Left Handed	Red Helmet	Loud Whistle
Cadet Ruby	Moon Jump	Cosmic Magnet	Left Handed	Silver Helmet	Bright Light
Cadet Ivy	Moon Jump	Plasma Blaster	Left Handed	Red Helmet	Water Spray
Valentina Tereshkova	Laser Beam	Plasma Blaster	Right Handed	Red Helmet	Loud Whistle
Yuri Gagarin	Moon Jump	Comet Dash	Left Handed	Red Helmet	Loud Whistle
Mae Jemison	Laser Beam	Meteor Blast	Right Handed	Silver Helmet	Loud Whistle
Cadet Zoe	Star Shield	Cosmic Magnet	Left Handed	Silver Helmet	Loud Whistle
Cadet Ava	Rocket Boost	Nebula Cloud	Right Handed	Red Helmet	Loud Whistle
Sally Ride	Moon Jump	Nebula Cloud	Right Handed	Red Helmet	Loud Whistle
Cadet Liam	Rocket Boost	Plasma Blaster	Left Handed	Blue Helmet	Water Spray
Cadet Eli	Star Shield	Cosmic Magnet	Left Handed	Red Helmet	Loud Whistle
Cadet Jax	Star Shield	Plasma Blaster	Right Handed	Blue Helmet	Loud Whistle
Cadet Max	Laser Beam	Nebula Cloud	Right Handed	Red Helmet	Loud Whistle
Cadet Finn	Moon Jump	Nebula Cloud	Left Handed	Red Helmet	Loud Whistle
Cadet Ella	Rocket Boost	Cosmic Magnet	Left Handed	Red Helmet	Loud Whistle
Buzz Aldrin	Moon Jump	Plasma Blaster	Right Handed	Red Helmet	Water Spray
Chris Hadfield	Moon Jump	Plasma Blaster	Right Handed	Silver Helmet	Bright Light
Cadet Sam	Moon Jump	Plasma Blaster	Left Handed	Red Helmet	Bright Light
John Glenn	Star Shield	Nebula Cloud	Left Handed	Red Helmet	Water Spray

CLUE 1 Place value

The control deck computer displays tens and ones to reveal a secret clue.

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



What number has 9 tens and 0 ones? ☐ → T

What number has 7 tens and 9 ones? ☐ → M

What number has 3 tens and 6 ones? ☐ → D

What number has 7 tens and 2 ones? ☐ → I

What number has 7 tens and 8 ones? ☐ → C

What number has 2 tens and 9 ones? ☐ → A

What number has 5 tens and 7 ones? ☐ → U

What number has 7 tens and 5 ones? ☐ → O

What number has 1 ten and 6 ones? ☐ → L

What number has 2 tens and 5 ones? ☐ → H

What number has 5 tens and 8 ones? ☐ → N

What number has 8 tens and 4 ones? ☐ → E

What number has 5 tens and 4 ones? ☐ → S

What number has 5 tens and 0 ones? ☐ → V

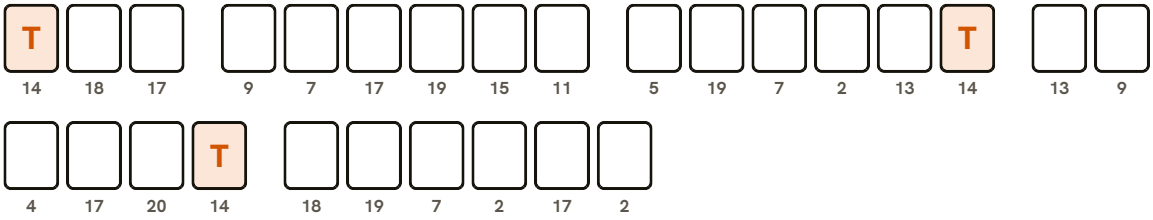
Scratch space:

CLUE 2

Addition

Astronaut Leo adds up the moon rocks found near the launch pad.

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



8 + 6 = ☐ → T

9 + 6 = ☐ → K

3 + 4 = ☐ → N

12 + 5 = ☐ → E

1 + 3 = ☐ → L

11 + 8 = ☐ → A

7 + 6 = ☐ → I

6 + 12 = ☐ → H

7 + 4 = ☐ → Y

6 + 3 = ☐ → S

1 + 4 = ☐ → B

6 + 14 = ☐ → F

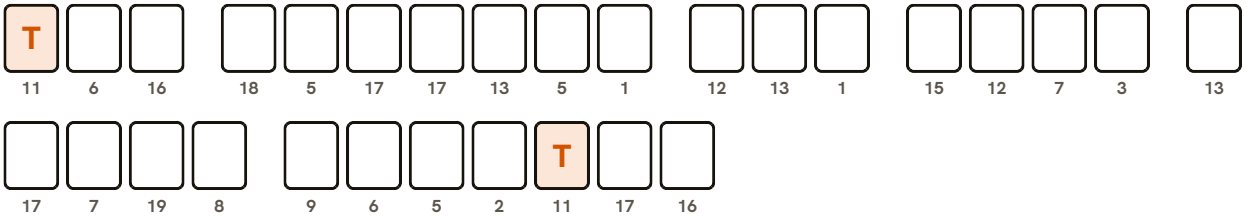
1 + 1 = ☐ → D

Scratch space:

CLUE 3 Subtraction

Cadet Maya counts how many glow badges are left after the raid.

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



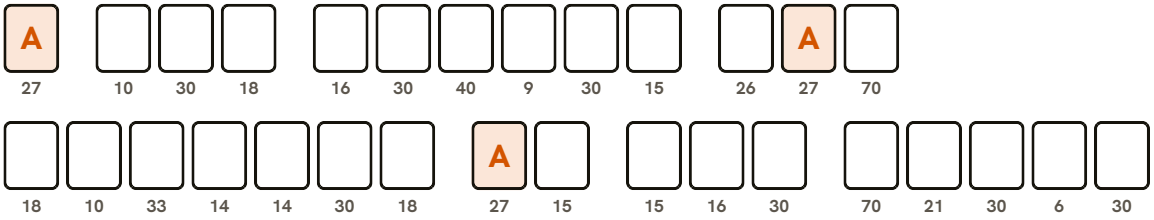
17 - 6 = ☐ → T	16 - 9 = ☐ → O	14 - 8 = ☐ → H	
20 - 1 = ☐ → U	6 - 3 = ☐ → M	2 - 1 = ☐ → N	16 - 8 = ☐ → D
14 - 2 = ☐ → R	12 - 3 = ☐ → W	19 - 1 = ☐ → V	
19 - 3 = ☐ → E	20 - 3 = ☐ → L	20 - 5 = ☐ → F	
16 - 3 = ☐ → A	10 - 8 = ☐ → S	12 - 7 = ☐ → I	

Scratch space:

CLUE 4 Skip counting

Commander Buzz counts battery packs by twos along the hallway.

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



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

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

Skip-count by 3s. Fill the blank: 3, 6, ___, 12, 15 ☐ → **M**

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

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

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

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

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

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, ___, 18, 21 ☐ → **T**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 ☐ → **R**

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 [ ] → **H**

Scratch space:

CLUE 5 Missing addends - the last clue

Engineer Sam checks how many extra solar cells are needed to restore power.

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:

10 + ___ = 12 ☐	3 + ___ = 13 ☐	7 + ___ = 11 ☐	2 + ___ = 9 ☐
10 + ___ = 19 ☐	2 + ___ = 3 ☐	5 + ___ = 10 ☐	6 + ___ = 9 ☐
6 + ___ = 18 ☐	6 + ___ = 14 ☐	10 + ___ = 21 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain leaps with moon jump, then grabs the plasma blaster.
2. The villain activates zero gravity, then hides in the nebula cloud.
3. The villain fires the rocket boost, then triggers the comet dash.
4. The villain fires the rocket boost, then attaches the cosmic magnet.
5. The villain leaps with moon jump, then triggers the comet dash.
6. The villain raises the star shield, then attaches the cosmic magnet.
7. The villain zaps the laser beam, then hides in the nebula cloud.
8. The villain fires the rocket boost, then launches the meteor blast.
9. The villain activates zero gravity, then grabs the plasma blaster.
10. The villain leaps with moon jump, then hides in the nebula cloud.
11. The villain leaps with moon jump, then attaches the cosmic magnet.
12. The villain raises the star shield, then grabs the plasma blaster.

TEACHER / PARENT

Answer Key

The Starlight Station Mystery

Culprit: Cadet Eli

Star Shield · Cosmic Magnet · Left Handed · Red Helmet · Loud Whistle

Trail: Start 21 → Clue 1 19 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE COMET DASH"

What number has 9 tens and 0 ones? = 90 (T) · What number has 7 tens and 9 ones? = 79 (M) · What number has 3 tens and 6 ones? = 36 (D) · What number has 7 tens and 2 ones? = 72 (I) · What number has 7 tens and 8 ones? = 78 (C) · What number has 2 tens and 9 ones? = 29 (A) · What number has 5 tens and 7 ones? = 57 (U) · What number has 7 tens and 5 ones? = 75 (O) · What number has 1 ten and 6 ones? = 16 (L) · What number has 2 tens and 5 ones? = 25 (H) · What number has 5 tens and 8 ones? = 58 (N) · What number has 8 tens and 4 ones? = 84 (E) · What number has 5 tens and 4 ones? = 54 (S) · What number has 5 tens and 0 ones? = 50 (V)

Clue 2 (Addition): "THE SNEAKY BANDIT IS LEFT HANDED"

8 + 6 = 14 (T) · 9 + 6 = 15 (K) · 3 + 4 = 7 (N) · 12 + 5 = 17 (E) · 1 + 3 = 4 (L) · 11 + 8 = 19 (A) · 7 + 6 = 13 (I) · 6 + 12 = 18 (H) · 7 + 4 = 11 (Y) · 6 + 3 = 9 (S) · 1 + 4 = 5 (B) · 6 + 14 = 20 (F) · 1 + 1 = 2 (D)

Clue 3 (Subtraction): "THE VILLAIN RAN FROM A LOUD WHISTLE"

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

Clue 4 (Skip counting): "A RED HELMET WAS DROPPED AT THE SCENE"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 = 27 (A) · Skip-count by 10s. Fill the blank: 10, 20, 30, ___, 50, 60 = 40 (L) · Skip-count by 3s. Fill the blank: 3, 6, ___, 12, 15 = 9 (M) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 = 14 (P) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, ___, 35, 40 = 30 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, ___, 21, 24 = 18 (D) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, ___, 36, 39 = 33 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, ___, 80, 90 = 70 (S) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (W) · Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 = 6 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, ___, 18, 21 = 15 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 = 10 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 = 21 (C) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, ___, 18, 20 = 16 (H)

Clue 5 (Missing addends): surviving statement is box 6 → Cadet Eli

10 + ___ = 12 = 2 · 3 + ___ = 13 = 10 · 7 + ___ = 11 = 4 · 2 + ___ = 9 = 7 · 10 + ___ = 19 = 9 · 2 + ___ = 3 = 1 · 5 + ___ = 10 = 5 · 6 + ___ = 9 = 3 · 6 + ___ = 18 = 12 · 6 + ___ = 14 = 8 · 10 + ___ = 21 = 11