The Starlight Station Sabotage

Grade 4 math · Addition, Rounding, Subtraction, Multiplication, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

A sneaky space bandit snuck into Lunar Outpost Alpha and scrambled the telescope data! Cadet Leo and the Astro Squad need your help to crack the clues, examine the evidence, and identify the culprit before the moon rover departs.

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

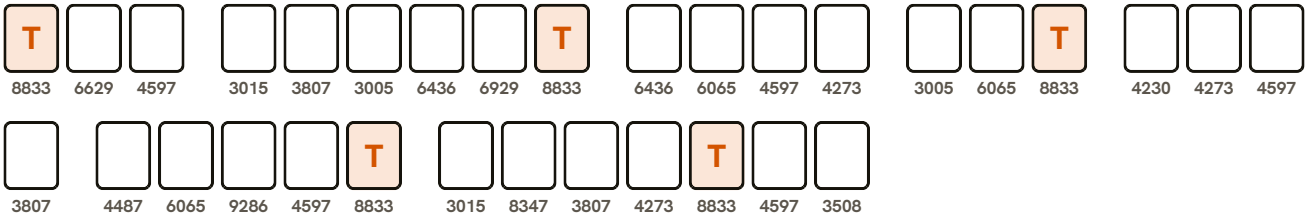
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SPACE GEAR	ALIEN GADGET	HELMET VISOR	SPACE SUIT COLOR	COUNTERMEASURE
Peggy Whitson	Jetpack Pack	Moon Ray	Gold Visor	Neon Blue Suit	Solar Flare Flash
Valentina Tereshkova	Magnetic Boots	Starlight Ray	Gold Visor	Cosmic Purple Suit	Solar Flare Flash
Sally Ride	Gravity Glove	Moon Ray	Gold Visor	Cosmic Purple Suit	Solar Flare Flash
Chris Hadfield	Jetpack Pack	Comet Blaster	Gold Visor	Cosmic Purple Suit	Sonic Whistle
Jeanette Epps	Gravity Glove	Comet Blaster	Silver Visor	Neon Blue Suit	Sonic Whistle
Neil Armstrong	Jetpack Pack	Plasma Shield	Silver Visor	Cosmic Purple Suit	Sonic Whistle
Jonny Kim	Gravity Glove	Comet Blaster	Gold Visor	Solar Orange Suit	Sonic Whistle
Sunita Williams	Laser Torch	Nebula Beam	Silver Visor	Cosmic Purple Suit	EMP Blast
Ellen Ochoa	Jetpack Pack	Plasma Shield	Gold Visor	Solar Orange Suit	Sonic Whistle
Yuri Gagarin	Laser Torch	Moon Ray	Silver Visor	Neon Blue Suit	EMP Blast
Buzz Aldrin	Jetpack Pack	Plasma Shield	Silver Visor	Neon Blue Suit	EMP Blast
Mae Jemison	Magnetic Boots	Comet Blaster	Gold Visor	Neon Blue Suit	Solar Flare Flash
Victor Glover	Magnetic Boots	Moon Ray	Silver Visor	Cosmic Purple Suit	Sonic Whistle
Christina Koch	Magnetic Boots	Comet Blaster	Gold Visor	Neon Blue Suit	Sonic Whistle
Bernard Harris	Radar Helmet	Starlight Ray	Silver Visor	Neon Blue Suit	Sonic Whistle
Michael Collins	Jetpack Pack	Plasma Shield	Silver Visor	Neon Blue Suit	Sonic Whistle
Kalpana Chawla	Gravity Glove	Moon Ray	Gold Visor	Neon Blue Suit	Sonic Whistle
Leland Melvin	Jetpack Pack	Nebula Beam	Gold Visor	Solar Orange Suit	EMP Blast
Alan Shepard	Radar Helmet	Plasma Shield	Silver Visor	Neon Blue Suit	Sonic Whistle
John Glenn	Laser Torch	Nebula Beam	Silver Visor	Neon Blue Suit	Sonic Whistle
Joseph Acaba	Gravity Glove	Starlight Ray	Silver Visor	Neon Blue Suit	EMP Blast

CLUE 1 Addition

The station guard tallied up all the damaged solar panels across the docks to uncover the first clue.

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



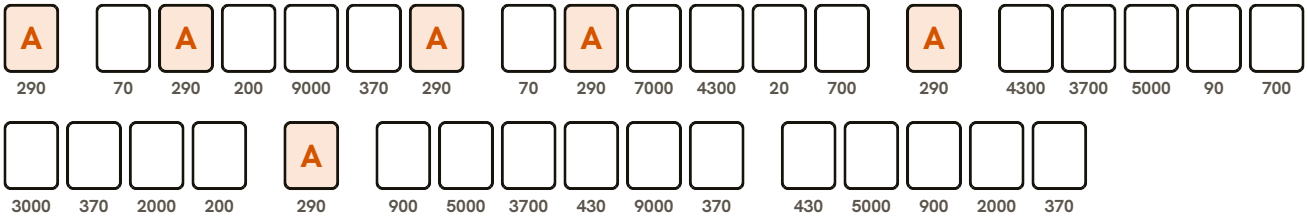
4496 + 4337 = ☐ → T	2559 + 4370 = ☐ → I	1787 + 2443 = ☐ → U
3704 + 2925 = ☐ → H	3048 + 1439 = ☐ → C	1764 + 2043 = ☐ → A
2004 + 1001 = ☐ → N	2435 + 3630 = ☐ → O	1114 + 1901 = ☐ → B
4116 + 5170 = ☐ → M	2252 + 2345 = ☐ → E	3411 + 3025 = ☐ → D
3691 + 4656 = ☐ → L	1769 + 2504 = ☐ → S	2362 + 1146 = ☐ → R

Scratch space:

CLUE 2 Rounding

The sensor array only displays rounded energy readings, but it still reveals a hidden pattern.

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



Round 286 to the nearest ten ☐ → **A**

Round 1,692 to the nearest thousand ☐ → **O**

Round 369 to the nearest ten ☐ → **R**

Round 881 to the nearest hundred ☐ → **S**

Round 7,180 to the nearest thousand ☐ → **U**

Round 8,514 to the nearest thousand ☐ → **E**

Round 4,326 to the nearest hundred ☐ → **G**

Round 20 to the nearest ten ☐ → **H**

Round 431 to the nearest ten ☐ → **V**

Round 67 to the nearest ten ☐ → **C**

Round 93 to the nearest ten ☐ → **N**

Round 653 to the nearest hundred ☐ → **T**

Round 195 to the nearest hundred ☐ → **M**

Round 3,661 to the nearest hundred ☐ → **L**

Round 4,531 to the nearest thousand ☐ → **I**

Round 3,078 to the nearest thousand ☐ → **F**

Scratch space:

CLUE 3 Subtraction

By subtracting the missing oxygen tanks from the total inventory, the team found a secret message.

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



7826 - 4396 = ☐ → A

9256 - 4924 = ☐ → B

11850 - 3699 = ☐ → T

12719 - 4858 = ☐ → S

4303 - 2659 = ☐ → V

10344 - 2890 = ☐ → G

6426 - 1685 = ☐ → O

10957 - 3441 = ☐ → D

4357 - 538 = ☐ → W

8104 - 2204 = ☐ → C

4623 - 504 = ☐ → I

6387 - 1276 = ☐ → N

8281 - 252 = ☐ → E

10513 - 4204 = ☐ → H

1373 - 259 = ☐ → R

4637 - 813 = ☐ → Y

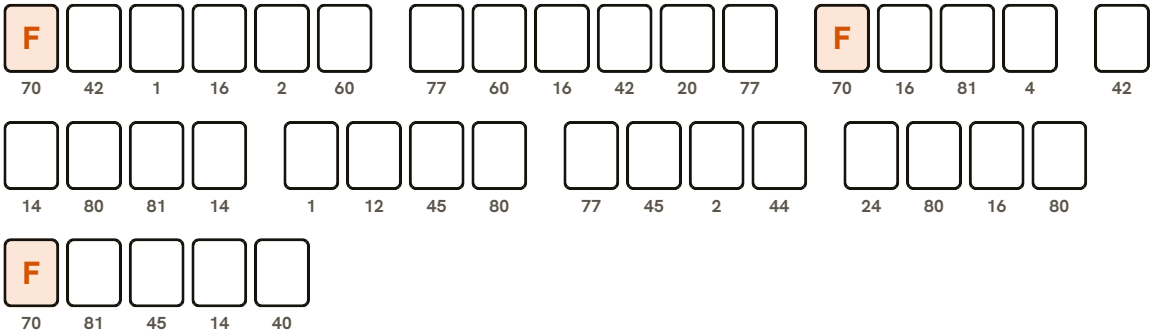
4947 - 745 = ☐ → L

Scratch space:

CLUE 4 Multiplication facts (1-12)

The technician counted rows of battery crates in the cargo bay to figure out the code.

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



10 × 7 = ☐ → F	5 × 12 = ☐ → C	1 × 2 = ☐ → I
1 × 1 = ☐ → B	4 × 11 = ☐ → T	8 × 10 = ☐ → E
2 × 2 = ☐ → M	5 × 4 = ☐ → P	7 × 6 = ☐ → A	2 × 7 = ☐ → N
2 × 12 = ☐ → W	4 × 4 = ☐ → R	5 × 9 = ☐ → U
7 × 11 = ☐ → S	9 × 9 = ☐ → O	4 × 3 = ☐ → L	5 × 8 = ☐ → D

Scratch space:

CLUE 5 Division facts (1-12) - the last clue

> Sharing space rations equally among the research pods unlocked the last data log.

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:

70 ÷ 7 = ☐ | 36 ÷ 6 = ☐ | 25 ÷ 5 = ☐ | 64 ÷ 8 = ☐ | 99 ÷ 9 = ☐

27 ÷ 9 = ☐ | 9 ÷ 9 = ☐ | 4 ÷ 2 = ☐ | 7 ÷ 1 = ☐ | 20 ÷ 5 = ☐

9 ÷ 1 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain grabbed with gravity glove, then charged the comet blaster.
2. The villain fired the laser torch, then deployed plasma shield.
3. The villain grabbed with gravity glove, then fired the nebula beam.
4. The villain activated magnetic boots, then beamed the starlight ray.
5. The villain fired the laser torch, then fired the nebula beam.
6. The villain scanned with radar helmet, then deployed plasma shield.
7. The villain used jetpack booster power, then charged the comet blaster.
8. The villain grabbed with gravity glove, then zapped with moon ray.
9. The villain used jetpack booster power, then zapped with moon ray.
10. The villain scanned with radar helmet, then beamed the starlight ray.
11. The villain activated magnetic boots, then fired the nebula beam.
12. The villain used jetpack booster power, then deployed plasma shield.

TEACHER / PARENT

Answer Key

The Starlight Station Sabotage

Culprit: Michael Collins

Jetpack Pack · Plasma Shield · Silver Visor · Neon Blue Suit · Sonic Whistle

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE BANDIT DOES NOT USE A COMET BLASTER"

4496 + 4337 = 8833 (T) · 2559 + 4370 = 6929 (I) · 1787 + 2443 = 4230 (U) · 3704 + 2925 = 6629 (H) · 3048 + 1439 = 4487 (C) · 1764 + 2043 = 3807 (A) · 2004 + 1001 = 3005 (N) · 2435 + 3630 = 6065 (O) · 1114 + 1901 = 3015 (B) · 4116 + 5170 = 9286 (M) · 2252 + 2345 = 4597 (E) · 3411 + 3025 = 6436 (D) · 3691 + 4656 = 8347 (L) · 1769 + 2504 = 4273 (S) · 2362 + 1146 = 3508 (R)

Clue 2 (Rounding): "A CAMERA CAUGHT A GLINT FROM A SILVER VISOR"

Round 286 to the nearest ten = 290 (A) · Round 1,692 to the nearest thousand = 2000 (O) · Round 369 to the nearest ten = 370 (R) · Round 881 to the nearest hundred = 900 (S) · Round 7,180 to the nearest thousand = 7000 (U) · Round 8,514 to the nearest thousand = 9000 (E) · Round 4,326 to the nearest hundred = 4300 (G) · Round 20 to the nearest ten = 20 (H) · Round 431 to the nearest ten = 430 (V) · Round 67 to the nearest ten = 70 (C) · Round 93 to the nearest ten = 90 (N) · Round 653 to the nearest hundred = 700 (T) · Round 195 to the nearest hundred = 200 (M) · Round 3,661 to the nearest hundred = 3700 (L) · Round 4,531 to the nearest thousand = 5000 (I) · Round 3,078 to the nearest thousand = 3000 (F)

Clue 3 (Subtraction): "A HIGH SONIC WHISTLE DROVE THE BANDIT AWAY"

7826 - 4396 = 3430 (A) · 9256 - 4924 = 4332 (B) · 11850 - 3699 = 8151 (T) · 12719 - 4858 = 7861 (S) · 4303 - 2659 = 1644 (V) · 10344 - 2890 = 7454 (G) · 6426 - 1685 = 4741 (O) · 10957 - 3441 = 7516 (D) · 4357 - 538 = 3819 (W) · 8104 - 2204 = 5900 (C) · 4623 - 504 = 4119 (I) · 6387 - 1276 = 5111 (N) · 8281 - 252 = 8029 (E) · 10513 - 4204 = 6309 (H) · 1373 - 259 = 1114 (R) · 4637 - 813 = 3824 (Y) · 4947 - 745 = 4202 (L)

Clue 4 (Multiplication facts (1-12)): "FABRIC SCRAPS FROM A NEON BLUE SUIT WERE FOUND"

10 × 7 = 70 (F) · 5 × 12 = 60 (C) · 1 × 2 = 2 (I) · 1 × 1 = 1 (B) · 4 × 11 = 44 (T) · 8 × 10 = 80 (E) · 2 × 2 = 4 (M) · 5 × 4 = 20 (P) · 7 × 6 = 42 (A) · 2 × 7 = 14 (N) · 2 × 12 = 24 (W) · 4 × 4 = 16 (R) · 5 × 9 = 45 (U) · 7 × 11 = 77 (S) · 9 × 9 = 81 (O) · 4 × 3 = 12 (L) · 5 × 8 = 40 (D)

Clue 5 (Division facts (1-12)): surviving statement is box 12 → Michael Collins

70 ÷ 7 = 10 · 36 ÷ 6 = 6 · 25 ÷ 5 = 5 · 64 ÷ 8 = 8 · 99 ÷ 9 = 11 · 27 ÷ 9 = 3 · 9 ÷ 9 = 1 · 4 ÷ 2 = 2 · 7 ÷ 1 = 7 · 20 ÷ 5 = 4 · 9 ÷ 1 = 9