



The Space Station Shenanigans

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

Detective: _____ **Date:** _____

A mystery has hit the Starlight Orbit Station! Someone snuck into the control room and reprogrammed the rocket launchers. Chief Flight Director Higgins found a trail of shiny stardust. We must find the Space Bandit before the rockets launch into the wrong orbit!

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 SUIT UPGRADE	GADGET TOOL	SIGNATURE MOVE	HELMET GLOW COLOR	SPACE FRIGHT
Leland	Cosmic Glider Wings	Plasma Welder	Waving left hand	Electric Blue Glow	Afraid of cosmic dust
Sunita	Magnetic Gloves	Solar Flashlight	Waving left hand	Electric Blue Glow	Allergic to moon rocks
Jim	Cosmic Glider Wings	Starlight Scanner	Waving left hand	Electric Blue Glow	Allergic to moon rocks
Yuri	Laser Jetpack	Asteroid Drill	Waving right hand	Bright Orange Glow	Afraid of cosmic dust
Victor	Rocket Roller Skates	Starlight Scanner	Waving right hand	Bright Orange Glow	Afraid of cosmic dust
Jeanette	Anti Gravity Boots	Starlight Scanner	Waving left hand	Bright Orange Glow	Afraid of cosmic dust
Alan	Cosmic Glider Wings	Starlight Scanner	Waving left hand	Bright Orange Glow	Afraid of cosmic dust
Valentina	Magnetic Gloves	Starlight Scanner	Waving left hand	Neon Green Glow	Scared of space frogs
Scott	Magnetic Gloves	Asteroid Drill	Waving right hand	Bright Orange Glow	Afraid of cosmic dust
Frank	Anti Gravity Boots	Lunar Grapple Hook	Waving left hand	Electric Blue Glow	Allergic to moon rocks
Jessica	Laser Jetpack	Solar Flashlight	Waving left hand	Electric Blue Glow	Allergic to moon rocks
Kalpana	Laser Jetpack	Asteroid Drill	Waving left hand	Electric Blue Glow	Scared of space frogs
Neil	Rocket Roller Skates	Plasma Welder	Waving left hand	Neon Green Glow	Allergic to moon rocks
Peggy	Magnetic Gloves	Plasma Welder	Waving left hand	Electric Blue Glow	Scared of space frogs
Ellen	Anti Gravity Boots	Plasma Welder	Waving right hand	Neon Green Glow	Allergic to moon rocks
Buzz	Laser Jetpack	Starlight Scanner	Waving right hand	Electric Blue Glow	Allergic to moon rocks
Sally	Anti Gravity Boots	Solar Flashlight	Waving left hand	Electric Blue Glow	Allergic to moon rocks
Gennady	Cosmic Glider Wings	Solar Flashlight	Waving left hand	Neon Green Glow	Scared of space frogs
Mae	Magnetic Gloves	Lunar Grapple Hook	Waving left hand	Electric Blue Glow	Allergic to moon rocks
Chris	Laser Jetpack	Lunar Grapple Hook	Waving right hand	Neon Green Glow	Afraid of cosmic dust
Christina	Cosmic Glider Wings	Solar Flashlight	Waving left hand	Bright Orange Glow	Scared of space frogs

CLUE 1

To unlock the first lock on the suspect diary, we need to solve the word problems left on the computer screen.

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

The diagram consists of three rows of boxes, each with a number below it.

- Row 1:** Contains 16 boxes. The first and tenth boxes are orange and contain the letter 'T'. The other boxes are white and empty. The numbers below the boxes are: 5000, 370, 2900, 110, 700, 110, 3000, 2900, 30, 5000, 4300, 290, 2900, 110, 3700, 290, 5000.
- Row 2:** Contains 14 empty white boxes. The numbers below the boxes are: 290, 500, 3700, 900, 1100, 700, 3700, 900, 430, 230, 430, 900, 3000, 3000, 1100, 2900.
- Row 3:** Contains 4 empty white boxes. The numbers below the boxes are: 370, 290, 290, 20.

Round 5,041 to the nearest thousand → **T**

Round 374 to the nearest ten $\rightarrow$ **H**

Round 226 to the nearest ten → **G**

Round 429 to the nearest ten $\rightarrow$ **R**

Round 2,909 to the nearest hundred → **E**

Round 1,128 to the nearest hundred → **L**

Round 467 to the nearest hundred → **W**

Round 31 to the nearest ten $\rightarrow$ **C**

Round 873 to the nearest hundred $\rightarrow$ **A**

Round 23 to the nearest ten $\rightarrow$ **K**

Round 3,696 to the nearest hundred → **N**

Round 3,250 to the nearest thousand $\rightarrow$ **P**

Round 4,323 to the nearest hundred → **D**

Round 110 to the nearest ten $\rightarrow$ **S**

Round 292 to the nearest ten $\rightarrow$ **0**

Round 737 to the nearest hundred $\rightarrow$ **U**

Scratch space:

CLUE 2

Word problems

The radar scanner shows a blurry signal of the suspect's getaway path. We must round the numbers to get a clear reading.

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

A witness saw the villain was W E F T H D .

53
58
12
8
22
63
30
58
22

Astronaut found 23 oxygen tanks yesterday and 30 more today. How many oxygen tanks in all?

Answer: → W

Astronaut found 3 space rations yesterday and 19 more today. How many space rations in all?

Answer: → N

There were 49 batteries. 19 were used up. How many batteries are left?

Answer: → L

There were 69 star maps. 11 were used up. How many star maps are left?

Answer: → A

There are 9 crew with 7 moon crystals in each. How many moon crystals in all?

Answer: → G

There are 2 crew with 4 moon crystals in each. How many moon crystals in all?

Answer: → I

There were 24 space rations. 12 were used up. How many space rations are left?

Answer: → V

Scratch space:

CLUE 3 Addition

Let us tally up the total number of battery packs left in the storage unit to find out how many the thief took.

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

T																
7667	8328	5300	5431	5066	5431	4556	5300	8835	7667	5431	9632	5300	5300	2757	5300	2737

				T												
9632	5300	7617	9663	7667	8328	5300	3281	9335	9335	9632	9663	9335	8835	5037	5431	

$3144 + 4523 = \square \rightarrow \boxed{T}$

$5395 + 2933 = \square \rightarrow \boxed{H}$

$1111 + 2170 = \square \rightarrow \boxed{M}$

$4951 + 4384 = \square \rightarrow \boxed{O}$

$1631 + 3435 = \square \rightarrow \boxed{U}$

$4378 + 5285 = \square \rightarrow \boxed{R}$

$1689 + 1068 = \square \rightarrow \boxed{Z}$

$2287 + 5330 = \square \rightarrow \boxed{A}$

$1461 + 1276 = \square \rightarrow \boxed{D}$

$5472 + 4160 = \square \rightarrow \boxed{N}$

$2726 + 1830 = \square \rightarrow \boxed{P}$

$3079 + 1958 = \square \rightarrow \boxed{K}$

$3539 + 5296 = \square \rightarrow \boxed{C}$

$2586 + 2714 = \square \rightarrow \boxed{E}$

$2082 + 3349 = \square \rightarrow \boxed{S}$

Scratch space:

CLUE 4

Subtraction

The fuel tank is leaking rapidly. Subtract the lost fuel from the starting amount to find the final clue.

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

T											T			T				
6446	3253	7216	4951	7216	6085	4951	7755	2076	4299	7216	6446	7216	1561	6446	7216	4299	4333	6085
				T														
7216	3449	7216	1561	6446	2076	5969	1561	1447	3449	3766	7216	8962	3449	7755	3083			

$8226 - 1780 = \square \rightarrow \boxed{\mathbf{T}}$

$5551 - 2468 = \square \rightarrow \boxed{\mathbf{W}}$

$12063 - 4847 = \square \rightarrow \boxed{\mathbf{E}}$

$3652 - 1576 = \square \rightarrow \boxed{\mathbf{R}}$

$6970 - 3204 = \square \rightarrow \boxed{\mathbf{U}}$

$6654 - 3401 = \square \rightarrow \boxed{\mathbf{H}}$

$9749 - 3780 = \square \rightarrow \boxed{\mathbf{I}}$

$7890 - 3591 = \square \rightarrow \boxed{\mathbf{D}}$

$12517 - 4762 = \square \rightarrow \boxed{\mathbf{O}}$

$10597 - 4512 = \square \rightarrow \boxed{\mathbf{N}}$

$5694 - 1361 = \square \rightarrow \boxed{\mathbf{A}}$

$5434 - 1985 = \square \rightarrow \boxed{\mathbf{L}}$

$11307 - 2345 = \square \rightarrow \boxed{\mathbf{G}}$

$5407 - 456 = \square \rightarrow \boxed{\mathbf{S}}$

$5657 - 4210 = \square \rightarrow \boxed{\mathbf{B}}$

$4854 - 3293 = \square \rightarrow \boxed{\mathbf{C}}$

Scratch space:

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

We found a pile of stolen moon crystals. Let's split them equally among our crew members to crack the final code.

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:

$3 \div 3 = \boxed{}$

$80 \div 8 = \boxed{}$

$44 \div 4 = \boxed{}$

$20 \div 5 = \boxed{}$

$66 \div 11 = \boxed{}$

$6 \div 3 = \boxed{}$

$45 \div 5 = \boxed{}$

$88 \div 11 = \boxed{}$

$40 \div 8 = \boxed{}$

$28 \div 4 = \boxed{}$

$15 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain marched across the launchpad, then locked the control panel door.
2. The villain zoomed past the solar panels, then turned off the artificial gravity.
3. The villain slipped through the cargo bay, then zapped the main computer screen.
4. The villain marched across the launchpad, then swiped the navigation maps.
5. The villain soared over the radar dish, then scrambled the radio codes.
6. The villain floated through the airlock, then turned off the artificial gravity.
7. The villain floated through the airlock, then scrambled the radio codes.
8. The villain zoomed past the solar panels, then swiped the navigation maps.
9. The villain marched across the launchpad, then scrambled the radio codes.
10. The villain floated through the airlock, then locked the control panel door.
11. The villain soared over the radar dish, then swiped the navigation maps.
12. The villain zoomed past the solar panels, then locked the control panel door.

Answer Key

The Space Station Shenanigans

Culprit: Jessica

Laser Jetpack · Solar Flashlight · Waving left hand · Electric Blue Glow · Allergic to moon rocks

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SUSPECT DOES NOT OWN A LUNAR GRAPPLE HOOK"

Round 5,041 to the nearest thousand = 5000 (T) · Round 374 to the nearest ten = 370 (H) · Round 226 to the nearest ten = 230 (G) · Round 429 to the nearest ten = 430 (R) · Round 2,909 to the nearest hundred = 2900 (E) · Round 1,128 to the nearest hundred = 1100 (L) · Round 467 to the nearest hundred = 500 (W) · Round 31 to the nearest ten = 30 (C) · Round 873 to the nearest hundred = 900 (A) · Round 23 to the nearest ten = 20 (K) · Round 3,696 to the nearest hundred = 3700 (N) · Round 3,250 to the nearest thousand = 3000 (P) · Round 4,323 to the nearest hundred = 4300 (D) · Round 110 to the nearest ten = 110 (S) · Round 292 to the nearest ten = 290 (O) · Round 737 to the nearest hundred = 700 (U)

Clue 2 (Word problems): "WAVING LEFT HAND"

Astronaut found 23 oxygen tanks yesterday and 30 more today. How many oxygen tanks in all? = 53 (W) · Astronaut found 3 space rations yesterday and 19 more today. How many space rations in all? = 22 (N) · There were 49 batteries. 19 were used up. How many batteries are left? = 30 (L) · There were 69 star maps. 11 were used up. How many star maps are left? = 58 (A) · There are 9 crew with 7 moon crystals in each. How many moon crystals in all? = 63 (G) · There are 2 crew with 4 moon crystals in each. How many moon crystals in all? = 8 (I) · There were 24 space rations. 12 were used up. How many space rations are left? = 12 (V)

Clue 3 (Addition): "THE SUSPECT SNEEZED NEAR THE MOON ROCKS"

$3144 + 4523 = 7667$ (T) · $5395 + 2933 = 8328$ (H) · $1111 + 2170 = 3281$ (M) · $4951 + 4384 = 9335$ (O) · $1631 + 3435 = 5066$ (U) · $4378 + 5285 = 9663$ (R) · $1689 + 1068 = 2757$ (Z) · $2287 + 5330 = 7617$ (A) · $1461 + 1276 = 2737$ (D) · $5472 + 4160 = 9632$ (N) · $2726 + 1830 = 4556$ (P) · $3079 + 1958 = 5037$ (K) · $3539 + 5296 = 8835$ (C) · $2586 + 2714 = 5300$ (E) · $2082 + 3349 = 5431$ (S)

Clue 4 (Subtraction): "THE SENSOR DETECTED AN ELECTRIC BLUE GLOW"

$8226 - 1780 = 6446$ (T) · $5551 - 2468 = 3083$ (W) · $12063 - 4847 = 7216$ (E) · $3652 - 1576 = 2076$ (R) · $6970 - 3204 = 3766$ (U) · $6654 - 3401 = 3253$ (H) · $9749 - 3780 = 5969$ (I) · $7890 - 3591 = 4299$ (D) · $12517 - 4762 = 7755$ (O) · $10597 - 4512 = 6085$ (N) · $5694 - 1361 = 4333$ (A) · $5434 - 1985 = 3449$ (L) · $11307 - 2345 = 8962$ (G) · $5407 - 456 = 4951$ (S) · $5657 - 4210 = 1447$ (B) · $4854 - 3293 = 1561$ (C)

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

$3 \div 3 = 1$ · $80 \div 8 = 10$ · $44 \div 4 = 11$ · $20 \div 5 = 4$ · $66 \div 11 = 6$ · $6 \div 3 = 2$ · $45 \div 5 = 9$ · $88 \div 11 = 8$ · $40 \div 8 = 5$ · $28 \div 4 = 7$ · $15 \div 5 = 3$