



The Great Space Station Scramble

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

Detective: _____ Date: _____

Someone has scrambled the orbit coordinates of the space station! The Lead Astronomer is stuck in the telescope pod and cannot get down. We must find the Cosmic Prankster before the power runs out!

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 Prankster is _____

Possible suspects

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

NAME	ASTRONAUT SUIT UPGRADE	THRUSTER PACK	OXYGEN METER PLACEMENT	HELMET GLOW COLOR	SYSTEM VULNERABILITY
Scott Kelly	Gravity Boots	Ion Engine	Right Arm Screen	Bright Orange Glow	Loud Whistle
Michael Collins	Gravity Boots	Turbo Booster	Left Arm Screen	Electric Blue Glow	Bright Flashlight
John Glenn	Force Shield	Ion Engine	Left Arm Screen	Electric Blue Glow	Bright Flashlight
Buzz Aldrin	Gravity Boots	Warp Drive	Right Arm Screen	Electric Blue Glow	Bright Flashlight
Peggy Whitson	Force Shield	Warp Drive	Left Arm Screen	Bright Orange Glow	Shiny Magnet
Yuri Gagarin	Laser Grapple	Quantum Leap	Right Arm Screen	Bright Orange Glow	Shiny Magnet
Jessica Meir	Force Shield	Quantum Leap	Left Arm Screen	Bright Orange Glow	Loud Whistle
Mae Jemison	Laser Grapple	Ion Engine	Right Arm Screen	Neon Green Glow	Loud Whistle
Chris Hadfield	Gravity Boots	Turbo Booster	Right Arm Screen	Neon Green Glow	Bright Flashlight
Leland Melvin	Gravity Boots	Solar Sail	Right Arm Screen	Electric Blue Glow	Bright Flashlight
Mark Kelly	Plasma Torch	Ion Engine	Left Arm Screen	Bright Orange Glow	Bright Flashlight
Neil Armstrong	Magnetic Gloves	Ion Engine	Right Arm Screen	Electric Blue Glow	Bright Flashlight
Eileen Collins	Force Shield	Turbo Booster	Right Arm Screen	Electric Blue Glow	Loud Whistle
Kalpana Chawla	Gravity Boots	Warp Drive	Right Arm Screen	Electric Blue Glow	Loud Whistle
Guy Bluford	Gravity Boots	Solar Sail	Left Arm Screen	Bright Orange Glow	Bright Flashlight
Kathy Sullivan	Plasma Torch	Warp Drive	Right Arm Screen	Electric Blue Glow	Bright Flashlight
Christina Koch	Gravity Boots	Solar Sail	Right Arm Screen	Electric Blue Glow	Shiny Magnet
Tim Peake	Magnetic Gloves	Quantum Leap	Right Arm Screen	Neon Green Glow	Bright Flashlight
Sunita Williams	Gravity Boots	Solar Sail	Right Arm Screen	Bright Orange Glow	Bright Flashlight
Sally Ride	Magnetic Gloves	Turbo Booster	Left Arm Screen	Electric Blue Glow	Shiny Magnet
Valentina Tereshkova	Plasma Torch	Quantum Leap	Right Arm Screen	Electric Blue Glow	Bright Flashlight

CLUE 1

The radar screen is dusty. It only displays rounded numbers for the distance to the runaway spaceship.

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

5000 3000 130 30 290 30 700 130 170 5000 2300 9000 130 30 7000 9000 5000

290 30 130 50 290 500 7000 5000 290 300 230 130 500 700

Round 4,868 to the nearest thousand → **T**

Round 54 to the nearest ten $\rightarrow$ **Q**

Round 171 to the nearest ten $\rightarrow$ **C**

Round 7,171 to the nearest thousand → **N**

Round 265 to the nearest hundred → **M**

Round 8,632 to the nearest thousand $\rightarrow$

Round 2,651 to the nearest thousand → **H**

Round 747 to the nearest hundred $\rightarrow$ **P**

Round 131 to the nearest ten $\rightarrow$ **E**

Round 290 to the nearest ten $\rightarrow$ **U**

Round 2,276 to the nearest hundred $\rightarrow$ **D**

Round 230 to the nearest ten $\rightarrow$ **L**

Round 30 to the nearest ten $\rightarrow$ **S**

Round 527 to the nearest hundred → **A**

Scratch space:

CLUE 2 Addition

To unlock the computer door, we must add up the total weight of the giant solar panels.

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

T									T									
3648	6672	3752	6721	9553	7126	9279	2609	2796	3648	9810	9810	6721	2609	3752	3752	6274	2796	9810

		T						T				
2492	6274	3648	6672	3752	2609	2796	4782	6672	3648	2810	2609	5432

$2047 + 1601 = \square \rightarrow \text{T}$	$1151 + 1341 = \square \rightarrow \text{O}$	$2761 + 3513 = \square \rightarrow \text{N}$
$4691 + 4862 = \square \rightarrow \text{U}$	$1616 + 993 = \square \rightarrow \text{R}$	$4444 + 5366 = \square \rightarrow \text{S}$
$2208 + 1544 = \square \rightarrow \text{E}$	$1927 + 883 = \square \rightarrow \text{A}$	$3040 + 3632 = \square \rightarrow \text{H}$
$1729 + 1067 = \square \rightarrow \text{I}$	$4813 + 4466 = \square \rightarrow \text{P}$	$2296 + 4425 = \square \rightarrow \text{C}$
$1824 + 2958 = \square \rightarrow \text{G}$	$3138 + 2294 = \square \rightarrow \text{M}$	$4298 + 2828 = \square \rightarrow \text{L}$

Scratch space:

CLUE 3

Subtraction

We need to subtract the leaked oxygen levels to find out how much air is left in the room.

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

6547 3784 3606 7701 4242 2853 2853 6098 4242 3721 6143 3606 6098 8699 3606 3116 6098

7715 8699 4242 6102 3784 6547 6143 2853 6098 3959 3784 2853 4242 6102 3784 6547

$9298 - 2751 = \boxed{} \rightarrow \boxed{\text{T}}$

$11948 - 4233 = \boxed{} \rightarrow \boxed{\text{B}}$

$8674 - 4953 = \boxed{} \rightarrow \boxed{\text{N}}$

$7078 - 3962 = \boxed{} \rightarrow \boxed{\text{D}}$

$7422 - 4569 = \boxed{} \rightarrow \boxed{\text{L}}$

$9357 - 658 = \boxed{} \rightarrow \boxed{\text{R}}$

$7942 - 4158 = \boxed{} \rightarrow \boxed{\text{H}}$

$4198 - 239 = \boxed{} \rightarrow \boxed{\text{S}}$

$10823 - 3122 = \boxed{} \rightarrow \boxed{\text{V}}$

$10315 - 4217 = \boxed{} \rightarrow \boxed{\text{A}}$

$7127 - 3521 = \boxed{} \rightarrow \boxed{\text{E}}$

$8830 - 2687 = \boxed{} \rightarrow \boxed{\text{F}}$

$8847 - 4605 = \boxed{} \rightarrow \boxed{\text{I}}$

$8079 - 1977 = \boxed{} \rightarrow \boxed{\text{G}}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

The computer needs to map the asteroid belt, which has equal rows of spinning space crystals.

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

A																	
7	64	144	6	144	45	56	100	5	45	14	6	44	144	20	6	15	84

								A			A
6	5	56	44	63	56	30	144	7	100	144	7

$1 \times 7 = \square \rightarrow \text{A}$

$3 \times 5 = \square \rightarrow \text{O}$

$7 \times 2 = \square \rightarrow \text{B}$

$6 \times 5 = \square \rightarrow \text{H}$

$1 \times 5 = \square \rightarrow \text{I}$

$9 \times 5 = \square \rightarrow \text{C}$

$7 \times 9 = \square \rightarrow \text{P}$

$8 \times 7 = \square \rightarrow \text{T}$

$12 \times 12 = \square \rightarrow \text{E}$

$4 \times 11 = \square \rightarrow \text{U}$

$2 \times 3 = \square \rightarrow \text{L}$

$5 \times 4 = \square \rightarrow \text{G}$

$10 \times 10 = \square \rightarrow \text{R}$

$12 \times 7 = \square \rightarrow \text{W}$

$8 \times 8 = \square \rightarrow \text{N}$

Scratch space:

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

We have to split the remaining energy cells equally among the backup thrusters to reboot the grid.

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:

$21 \div 3 = \boxed{}$

$45 \div 5 = \boxed{}$

$60 \div 6 = \boxed{}$

$33 \div 11 = \boxed{}$

$16 \div 4 = \boxed{}$

$25 \div 5 = \boxed{}$

$32 \div 4 = \boxed{}$

$66 \div 11 = \boxed{}$

$48 \div 4 = \boxed{}$

$9 \div 9 = \boxed{}$

$2 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swings using a laser grapple, then zooms off with a turbo booster.
2. The villain stomps by with gravity boots, then zips by with an ion engine.
3. The villain blocks the doorway with a force shield, then zips by with an ion engine.
4. The villain swings using a laser grapple, then zips by with an ion engine.
5. The villain swings using a laser grapple, then glides away on a solar sail.
6. The villain cuts the locks with a plasma torch, then zips by with an ion engine.
7. The villain climbs walls with magnetic gloves, then zips by with an ion engine.
8. The villain cuts the locks with a plasma torch, then glides away on a solar sail.
9. The villain stomps by with gravity boots, then blasts through a warp drive.
10. The villain cuts the locks with a plasma torch, then blasts through a warp drive.
11. The villain stomps by with gravity boots, then glides away on a solar sail.
12. The villain swings using a laser grapple, then disappears in a quantum leap.

Answer Key

The Great Space Station Scramble

Culprit: Leland Melvin

Gravity Boots · Solar Sail · Right Arm Screen · Electric Blue Glow · Bright Flashlight

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SUSPECT DOES NOT USE QUANTUM LEAP"

Round 4,868 to the nearest thousand = 5000 (T) · Round 54 to the nearest ten = 50 (Q) · Round 171 to the nearest ten = 170 (C) · Round 7,171 to the nearest thousand = 7000 (N) · Round 265 to the nearest hundred = 300 (M) · Round 8,632 to the nearest thousand = 9000 (O) · Round 2,651 to the nearest thousand = 3000 (H) · Round 747 to the nearest hundred = 700 (P) · Round 131 to the nearest ten = 130 (E) · Round 290 to the nearest ten = 290 (U) · Round 2,276 to the nearest hundred = 2300 (D) · Round 230 to the nearest ten = 230 (L) · Round 30 to the nearest ten = 30 (S) · Round 527 to the nearest hundred = 500 (A)

Clue 2 (Addition): "THE CULPRITS SCREEN IS ON THE RIGHT ARM"

$2047 + 1601 = 3648$ (T) · $1151 + 1341 = 2492$ (O) · $2761 + 3513 = 6274$ (N) · $4691 + 4862 = 9553$ (U) · $1616 + 993 = 2609$ (R) · $4444 + 5366 = 9810$ (S) · $2208 + 1544 = 3752$ (E) · $1927 + 883 = 2810$ (A) · $3040 + 3632 = 6672$ (H) · $1729 + 1067 = 2796$ (I) · $4813 + 4466 = 9279$ (P) · $2296 + 4425 = 6721$ (C) · $1824 + 2958 = 4782$ (G) · $3138 + 2294 = 5432$ (M) · $4298 + 2828 = 7126$ (L)

Clue 3 (Subtraction): "THE VILLAIN FEARED A BRIGHT FLASHLIGHT"

$9298 - 2751 = 6547$ (T) · $11948 - 4233 = 7715$ (B) · $8674 - 4953 = 3721$ (N) · $7078 - 3962 = 3116$ (D) · $7422 - 4569 = 2853$ (L) · $9357 - 658 = 8699$ (R) · $7942 - 4158 = 3784$ (H) · $4198 - 239 = 3959$ (S) · $10823 - 3122 = 7701$ (V) · $10315 - 4217 = 6098$ (A) · $7127 - 3521 = 3606$ (E) · $8830 - 2687 = 6143$ (F) · $8847 - 4605 = 4242$ (I) · $8079 - 1977 = 6102$ (G)

Clue 4 (Multiplication facts (1-12)): "AN ELECTRIC BLUE GLOW LIT UP THE AREA"

$1 \times 7 = 7$ (A) · $3 \times 5 = 15$ (O) · $7 \times 2 = 14$ (B) · $6 \times 5 = 30$ (H) · $1 \times 5 = 5$ (I) · $9 \times 5 = 45$ (C) · $7 \times 9 = 63$ (P) · $8 \times 7 = 56$ (T) · $12 \times 12 = 144$ (E) · $4 \times 11 = 44$ (U) · $2 \times 3 = 6$ (L) · $5 \times 4 = 20$ (G) · $10 \times 10 = 100$ (R) · $12 \times 7 = 84$ (W) · $8 \times 8 = 64$ (N)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Leland Melvin

$21 \div 3 = 7$ · $45 \div 5 = 9$ · $60 \div 6 = 10$ · $33 \div 11 = 3$ · $16 \div 4 = 4$ · $25 \div 5 = 5$ · $32 \div 4 = 8$ · $66 \div 11 = 6$ · $48 \div 4 = 12$ · $9 \div 9 = 1$ · $2 \div 1 = 2$