



The Mystery of Starship Orion

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

Detective: _____ **Date:** _____

A sneaky Impostor is sabotaging tasks aboard Starship Orion! The Chief Engineer needs your detective skills to analyze clues, solve crew logs, and uncover the villain before the ship loses power.

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 Impostor is _____

Possible suspects

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

NAME	SABOTAGE MOVE	SPECIAL GEAR	DOMINANT HAND	VISOR COLOR	SECURITY TRAP
Pink	Comms Disruption	Gravity Boots	Right Handed	Green Visor	Security Cam
Black	Vent Creeping	Radar Cloak	Left Handed	Blue Visor	Flashlight
Banana	Door Jamming	Radar Cloak	Right Handed	Red Visor	Flashlight
Gray	Vent Creeping	Energy Shield	Right Handed	Green Visor	Security Cam
Maroon	Vent Creeping	Scanner Jammer	Right Handed	Red Visor	Flashlight
Navy	Comms Disruption	Energy Shield	Right Handed	Red Visor	Alarm Bell
Brown	Light Sabotage	Laser Cutter	Left Handed	Red Visor	Flashlight
Plum	Task Faking	Energy Shield	Right Handed	Red Visor	Flashlight
Olive	Vent Creeping	Gravity Boots	Left Handed	Blue Visor	Alarm Bell
Yellow	Light Sabotage	Energy Shield	Left Handed	Red Visor	Flashlight
Orange	Task Faking	Laser Cutter	Right Handed	Green Visor	Flashlight
Red	Light Sabotage	Radar Cloak	Left Handed	Red Visor	Security Cam
Tan	Comms Disruption	Laser Cutter	Right Handed	Green Visor	Security Cam
Cyan	Comms Disruption	Laser Cutter	Left Handed	Red Visor	Alarm Bell
Jade	Comms Disruption	Scanner Jammer	Right Handed	Green Visor	Alarm Bell
Lime	Vent Creeping	Laser Cutter	Left Handed	Blue Visor	Flashlight
White	Door Jamming	Laser Cutter	Right Handed	Blue Visor	Security Cam
Blue	Light Sabotage	Radar Cloak	Left Handed	Red Visor	Alarm Bell
Rose	Light Sabotage	Laser Cutter	Right Handed	Red Visor	Flashlight
Coral	Light Sabotage	Gravity Boots	Left Handed	Green Visor	Alarm Bell
Rust	Door Jamming	Gravity Boots	Right Handed	Red Visor	Flashlight

CLUE 1 Rounding

The navigation screen only displays approximate distance numbers. Round to the nearest tens place to unlock the first clue log.

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

T									T								T
4300	110	430	700	130	200	1300	1100	4300	1300	20	2300	1300	430	1100	170	1300	4300
110	2000	900	430	1100	370	2000	170	170	430	20	3700	2000	130	130	430	20	

Round 4,299 to the nearest hundred → **T**

Round 729 to the nearest hundred → **I**

Round 170 to the nearest ten → **N**

Round 157 to the nearest hundred → **P**

Round 21 to the nearest ten → **R**

Round 891 to the nearest hundred → **V**

Round 373 to the nearest ten → **C**

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

Round 129 to the nearest ten → **M**

Round 428 to the nearest ten → **E**

Round 3,655 to the nearest hundred → **J**

Round 2,109 to the nearest thousand → **A**

Round 111 to the nearest ten → **H**

Round 1,322 to the nearest hundred → **O**

Round 2,294 to the nearest hundred → **D**

Scratch space:

CLUE 2 Addition

You find two stacks of fuel cells left near the engine room. Add the cell totals together to decode the second clue.

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

W									W						
2639	9304	8203	7970	8424	4618	4618	4618	6553	2639	6553	4252	9304	7314	6563	8203
6563	6553	7970	2804	8424	2804	4618	7461	4618	8559	8424	8096	8203			

$1129 + 1510 = \square \rightarrow \boxed{W}$

$5592 + 2832 = \square \rightarrow \boxed{E}$

$4348 + 2215 = \square \rightarrow \boxed{H}$

$1585 + 1219 = \square \rightarrow \boxed{D}$

$3614 + 4482 = \square \rightarrow \boxed{C}$

$4533 + 2928 = \square \rightarrow \boxed{U}$

$4925 + 3278 = \square \rightarrow \boxed{T}$

$1298 + 2954 = \square \rightarrow \boxed{R}$

$4264 + 2289 = \square \rightarrow \boxed{A}$

$3493 + 4477 = \square \rightarrow \boxed{N}$

$1722 + 2896 = \square \rightarrow \boxed{S}$

$4119 + 3195 = \square \rightarrow \boxed{G}$

$5472 + 3832 = \square \rightarrow \boxed{I}$

$3291 + 5268 = \square \rightarrow \boxed{P}$

Scratch space:

CLUE 3
Subtraction

A gas leak drained part of the oxygen tank in the cafeteria. Subtract the lost amount from the starting supply to find the third clue.

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

T																	
8997	3938	1188	7702	1827	1188	4942	1486	7385	4942	7702	7702	5993	6985	6985	1486	1188	8070

3397	1549	4942	5760	3657	4942	7702	3938	3657	3527	4358	3938	8997					

$10276 - 1279 = \boxed{} \rightarrow \boxed{\text{T}}$

$8360 - 4703 = \boxed{} \rightarrow \boxed{\text{L}}$

$7403 - 1643 = \boxed{} \rightarrow \boxed{\text{F}}$

$4582 - 1055 = \boxed{} \rightarrow \boxed{\text{I}}$

$2471 - 644 = \boxed{} \rightarrow \boxed{\text{N}}$

$6280 - 4731 = \boxed{} \rightarrow \boxed{\text{Y}}$

$9488 - 2103 = \boxed{} \rightarrow \boxed{\text{W}}$

$6842 - 3445 = \boxed{} \rightarrow \boxed{\text{B}}$

$7290 - 305 = \boxed{} \rightarrow \boxed{\text{O}}$

$4476 - 538 = \boxed{} \rightarrow \boxed{\text{H}}$

$2204 - 1016 = \boxed{} \rightarrow \boxed{\text{E}}$

$7880 - 2938 = \boxed{} \rightarrow \boxed{\text{A}}$

$5732 - 1374 = \boxed{} \rightarrow \boxed{\text{G}}$

$7753 - 1760 = \boxed{} \rightarrow \boxed{\text{P}}$

$10505 - 2803 = \boxed{} \rightarrow \boxed{\text{S}}$

$10054 - 1984 = \boxed{} \rightarrow \boxed{\text{D}}$

$4180 - 2694 = \boxed{} \rightarrow \boxed{\text{K}}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

Storage crates in the cargo bay are stacked in equal rows. Multiply the rows and crates to compute the fourth clue.

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

R							R			R					R	
42	50	35	64	100	21	66	42	96	49	42	30	21	1	50	42	50
110	66	25	28	35	49	54	54	3	50	21	24	50	28	50		

$6 \times 7 = \square \rightarrow$ R	$10 \times 10 = \square \rightarrow$ I	$3 \times 1 = \square \rightarrow$ H	
$7 \times 7 = \square \rightarrow$ A	$12 \times 8 = \square \rightarrow$ M	$10 \times 5 = \square \rightarrow$ E	
$2 \times 12 = \square \rightarrow$ C	$8 \times 8 = \square \rightarrow$ V	$11 \times 6 = \square \rightarrow$ O	
$5 \times 5 = \square \rightarrow$ U	$4 \times 7 = \square \rightarrow$ N	$3 \times 10 = \square \rightarrow$ K	$3 \times 7 = \square \rightarrow$ S
$7 \times 5 = \square \rightarrow$ D	$6 \times 9 = \square \rightarrow$ T	$11 \times 10 = \square \rightarrow$ F	
$1 \times 1 = \square \rightarrow$ W			

Scratch space:

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

The remaining space snacks must be shared equally among the crewmates. Divide the total snacks to get the final clue.

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:

$22 \div 11 = \boxed{}$

$121 \div 11 = \boxed{}$

$35 \div 7 = \boxed{}$

$16 \div 2 = \boxed{}$

$60 \div 10 = \boxed{}$

$12 \div 12 = \boxed{}$

$24 \div 2 = \boxed{}$

$72 \div 8 = \boxed{}$

$28 \div 7 = \boxed{}$

$90 \div 9 = \boxed{}$

$3 \div 1 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain locked the bay doors, then jammed the crew scanners.
2. The villain locked the bay doors, then stomped with gravity boots.
3. The villain turned off the lights, then activated an energy shield.
4. The villain snuck through the vents, then stomped with gravity boots.
5. The villain turned off the lights, then used a laser cutter.
6. The villain pretended to do tasks, then stomped with gravity boots.
7. The villain locked the bay doors, then turned on a radar cloak.
8. The villain pretended to do tasks, then used a laser cutter.
9. The villain turned off the lights, then turned on a radar cloak.
10. The villain pretended to do tasks, then jammed the crew scanners.
11. The villain pretended to do tasks, then activated an energy shield.
12. The villain cut the radio comms, then used a laser cutter.

Answer Key

The Mystery of Starship Orion

Culprit: Banana

Door Jamming · Radar Cloak · Right Handed · Red Visor · Flashlight

Trail: Start 21 → Clue 1 19 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE IMPOSTOR DOES NOT HAVE SCANNER JAMMER"

Round 4,299 to the nearest hundred = 4300 (T) · Round 729 to the nearest hundred = 700 (I) · Round 170 to the nearest ten = 170 (N) · Round 157 to the nearest hundred = 200 (P) · Round 21 to the nearest ten = 20 (R) · Round 891 to the nearest hundred = 900 (V) · Round 373 to the nearest ten = 370 (C) · Round 1,128 to the nearest hundred = 1100 (S) · Round 129 to the nearest ten = 130 (M) · Round 428 to the nearest ten = 430 (E) · Round 3,655 to the nearest hundred = 3700 (J) · Round 2,109 to the nearest thousand = 2000 (A) · Round 111 to the nearest ten = 110 (H) · Round 1,322 to the nearest hundred = 1300 (O) · Round 2,294 to the nearest hundred = 2300 (D)

Clue 2 (Addition): "WITNESS SAW A RIGHT HANDED SUSPECT"

$1129 + 1510 = 2639$ (W) · $5592 + 2832 = 8424$ (E) · $4348 + 2215 = 6563$ (H) · $1585 + 1219 = 2804$ (D) · $3614 + 4482 = 8096$ (C) · $4533 + 2928 = 7461$ (U) · $4925 + 3278 = 8203$ (T) · $1298 + 2954 = 4252$ (R) · $4264 + 2289 = 6553$ (A) · $3493 + 4477 = 7970$ (N) · $1722 + 2896 = 4618$ (S) · $4119 + 3195 = 7314$ (G) · $5472 + 3832 = 9304$ (I) · $3291 + 5268 = 8559$ (P)

Clue 3 (Subtraction): "THE SNEAK WAS SPOOKED BY A FLASHLIGHT"

$10276 - 1279 = 8997$ (T) · $8360 - 4703 = 3657$ (L) · $7403 - 1643 = 5760$ (F) · $4582 - 1055 = 3527$ (I) · $2471 - 644 = 1827$ (N) · $6280 - 4731 = 1549$ (Y) · $9488 - 2103 = 7385$ (W) · $6842 - 3445 = 3397$ (B) · $7290 - 305 = 6985$ (O) · $4476 - 538 = 3938$ (H) · $2204 - 1016 = 1188$ (E) · $7880 - 2938 = 4942$ (A) · $5732 - 1374 = 4358$ (G) · $7753 - 1760 = 5993$ (P) · $10505 - 2803 = 7702$ (S) · $10054 - 1984 = 8070$ (D) · $4180 - 2694 = 1486$ (K)

Clue 4 (Multiplication facts (1-12)): "RED VISOR MARKS WERE FOUND AT THE SCENE"

$6 \times 7 = 42$ (R) · $10 \times 10 = 100$ (I) · $3 \times 1 = 3$ (H) · $7 \times 7 = 49$ (A) · $12 \times 8 = 96$ (M) · $10 \times 5 = 50$ (E) · $2 \times 12 = 24$ (C) · $8 \times 8 = 64$ (V) · $11 \times 6 = 66$ (O) · $5 \times 5 = 25$ (U) · $4 \times 7 = 28$ (N) · $3 \times 10 = 30$ (K) · $3 \times 7 = 21$ (S) · $7 \times 5 = 35$ (D) · $6 \times 9 = 54$ (T) · $11 \times 10 = 110$ (F) · $1 \times 1 = 1$ (W)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Banana

$22 \div 11 = 2$ · $121 \div 11 = 11$ · $35 \div 7 = 5$ · $16 \div 2 = 8$ · $60 \div 10 = 6$ · $12 \div 12 = 1$ · $24 \div 2 = 12$ · $72 \div 8 = 9$ · $28 \div 7 = 4$ · $90 \div 9 = 10$ · $3 \div 1 = 3$