



Mystery of the Star Map Hijacker

Grade 5 math · Fractions of a number, Order of operations, Multiplication, Rounding, Division · Reading level grades 5-6

Detective: _____ Date: _____

A rogue hacker scrambled the observatory deep space coordinate grid and stole secret galaxy maps! Detective cadets must process data arrays and sector logs to expose the intruder.

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 rogue hacker is _____

Possible suspects

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

NAME	PRIMARY GADGET	SECONDARY GEAR	HABIT	VISOR GLOW	VULNERABILITY
Commander Cora	Gravity Boots	Drone Swarm	Taps Right Foot	Amber Orange	Magnet Interference
Scout Orion	Plasma Cutter	Matrix Key	Taps Left Foot	Amber Orange	Thermal Shock
Detective Cruz	Gravity Boots	Signal Booster	Taps Right Foot	Neon Blue	Thermal Shock
Specialist Finn	Pulse Scanner	Drone Swarm	Taps Left Foot	Amber Orange	EMP Burst
Tech Nora	Pulse Scanner	Warp Beacon	Taps Right Foot	Neon Blue	EMP Burst
Tech Kael	Sonic Decoder	Data Shield	Taps Right Foot	Cyber Green	EMP Burst
Analyst Skye	Pulse Scanner	Signal Booster	Taps Left Foot	Cyber Green	Magnet Interference
Agent Vance	Pulse Scanner	Warp Beacon	Taps Left Foot	Neon Blue	EMP Burst
Detective Ray	Laser Grid	Drone Swarm	Taps Right Foot	Neon Blue	EMP Burst
Cadet Jax	Pulse Scanner	Matrix Key	Taps Left Foot	Amber Orange	EMP Burst
Chief Mina	Plasma Cutter	Data Shield	Taps Right Foot	Cyber Green	Magnet Interference
Pilot Leo	Sonic Decoder	Data Shield	Taps Left Foot	Neon Blue	EMP Burst
Scout Dax	Sonic Decoder	Warp Beacon	Taps Left Foot	Neon Blue	Thermal Shock
Pilot Maya	Laser Grid	Warp Beacon	Taps Left Foot	Amber Orange	EMP Burst
Specialist Lyra	Sonic Decoder	Matrix Key	Taps Right Foot	Cyber Green	Magnet Interference
Officer Taro	Pulse Scanner	Matrix Key	Taps Left Foot	Neon Blue	EMP Burst
Captain Steel	Sonic Decoder	Matrix Key	Taps Left Foot	Neon Blue	Thermal Shock
Officer Rex	Gravity Boots	Warp Beacon	Taps Left Foot	Cyber Green	Thermal Shock
Specialist Ivy	Pulse Scanner	Signal Booster	Taps Left Foot	Neon Blue	EMP Burst
Agent Blake	Gravity Boots	Drone Swarm	Taps Left Foot	Neon Blue	EMP Burst
Commander Nova	Gravity Boots	Signal Booster	Taps Left Foot	Amber Orange	Magnet Interference

CLUE 1
Fractions of a number

To unlock the encrypted server log, the academy detective calculates a fraction of the total radar blips registered during the breach.

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

T																			
18	23	10	36	11	3	28	10	23	4	40	34	10	36	37	11	10	19		
		T																	
21	11	18	28	19	10	4	19	32	3	21	4	33							
				T															
8	11	11	19	18	10	36													

$2/10 \text{ of } 90 = \boxed{} \rightarrow \boxed{\text{T}}$

$2/6 \text{ of } 102 = \boxed{} \rightarrow \boxed{\text{K}}$

$4/5 \text{ of } 45 = \boxed{} \rightarrow \boxed{\text{R}}$

$1/3 \text{ of } 9 = \boxed{} \rightarrow \boxed{\text{G}}$

$4/6 \text{ of } 60 = \boxed{} \rightarrow \boxed{\text{C}}$

$1/4 \text{ of } 16 = \boxed{} \rightarrow \boxed{\text{A}}$

$3/6 \text{ of } 20 = \boxed{} \rightarrow \boxed{\text{E}}$

$1/8 \text{ of } 168 = \boxed{} \rightarrow \boxed{\text{N}}$

$3/10 \text{ of } 110 = \boxed{} \rightarrow \boxed{\text{L}}$

$2/6 \text{ of } 57 = \boxed{} \rightarrow \boxed{\text{S}}$

$2/8 \text{ of } 92 = \boxed{} \rightarrow \boxed{\text{H}}$

$5/10 \text{ of } 56 = \boxed{} \rightarrow \boxed{\text{U}}$

$1/8 \text{ of } 64 = \boxed{} \rightarrow \boxed{\text{B}}$

$1/5 \text{ of } 185 = \boxed{} \rightarrow \boxed{\text{D}}$

$2/8 \text{ of } 128 = \boxed{} \rightarrow \boxed{\text{I}}$

$2/8 \text{ of } 44 = \boxed{} \rightarrow \boxed{\text{O}}$

Scratch space:

CLUE 2
Order of operations

The security team evaluates a multi-step access code where multi-operation priority rules dictate the correct override key.

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

W									W							
66	10	29	64	6	70	70	70	60	66	70	16	70	46	6	49	29
29	60	46	46	10	64	68	12	6	24	29	24	42	42	29		

$8 \times 9 - 6 = \square \rightarrow \boxed{\text{W}}$

$18 + 2 \times 3 = \square \rightarrow \boxed{\text{F}}$

$10 \times 8 - 16 = \square \rightarrow \boxed{\text{N}}$

$5 \times 10 - 4 = \square \rightarrow \boxed{\text{P}}$

$10 \times 7 - 21 = \square \rightarrow \boxed{\text{C}}$

$2 + 2 \times 2 = \square \rightarrow \boxed{\text{E}}$

$56 + 2 \times 7 = \square \rightarrow \boxed{\text{S}}$

$3 + 3 \times 3 = \square \rightarrow \boxed{\text{L}}$

$7 \times 10 - 10 = \square \rightarrow \boxed{\text{A}}$

$4 \times 5 - 10 = \square \rightarrow \boxed{\text{I}}$

$9 \times 8 - 30 = \square \rightarrow \boxed{\text{O}}$

$12 + 2 \times 2 = \square \rightarrow \boxed{\text{U}}$

$52 + 2 \times 8 = \square \rightarrow \boxed{\text{G}}$

$17 + 2 \times 6 = \square \rightarrow \boxed{\text{T}}$

Scratch space:

CLUE 3
Multiplication facts (1-12)

By counting rows of high-density data arrays across the central mainframe grid, the team calculates the full magnitude of stolen sector files.

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

D													D				
7	56	44	56	100	44	9	10	56	5	6	5	56	7	56	45	80	
40	6	90	5	44	44	88	40	2	88	100	63	56	5	100	64	80	56

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

$1 \times 9 = \square \rightarrow \text{I}$

$10 \times 4 = \square \rightarrow \text{B}$

$9 \times 10 = \square \rightarrow \text{R}$

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

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

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

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

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

$2 \times 1 = \square \rightarrow \text{L}$

$11 \times 8 = \square \rightarrow \text{O}$

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

$1 \times 10 = \square \rightarrow \text{V}$

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

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

$8 \times 10 = \square \rightarrow \text{P}$

Scratch space:

CLUE 4 Rounding

The outer space sensor grid only displays galaxy coordinates rounded to the nearest thousand on its high-altitude scanner.

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

A			A													
20	50	30	20	3700	2300	430	170	5000	2300	430	5000	500	90	4300	2300	
					A											
130	90	430	1100	1100	20	110	90	2300	170	50	500	2300	1700	2900	5000	290

Round 19 to the nearest ten → **A**

Round 111 to the nearest ten → **S**

Round 3,697 to the nearest hundred → **C**

Round 287 to the nearest ten → **D**

Round 1,678 to the nearest hundred → **H**

Round 1,052 to the nearest hundred → **W**

Round 33 to the nearest ten → **R**

Round 2,302 to the nearest hundred → **E**

Round 2,940 to the nearest hundred → **I**

Round 126 to the nearest ten → **G**

Round 453 to the nearest hundred → **B**

Round 173 to the nearest ten → **F**

Round 4,271 to the nearest hundred → **U**

Round 4,557 to the nearest thousand → **N**

Round 426 to the nearest ten → **O**

Round 86 to the nearest ten → **L**

Round 51 to the nearest ten → **T**

Scratch space:

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

To distribute backup energy cores equally among all deep-space surveillance pods, the crew divides the available supply evenly.

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:

$20 \div 5 = \boxed{}$

$96 \div 8 = \boxed{}$

$40 \div 5 = \boxed{}$

$1 \div 1 = \boxed{}$

$33 \div 3 = \boxed{}$

$110 \div 11 = \boxed{}$

$56 \div 8 = \boxed{}$

$2 \div 1 = \boxed{}$

$48 \div 8 = \boxed{}$

$30 \div 6 = \boxed{}$

$15 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain locked down the vault doors, then activated a matrix key.
2. The villain jammed the star database, then set up a signal booster.
3. The villain hacked the orbital grid, then deployed a data shield.
4. The villain hacked the orbital grid, then dropped a warp beacon.
5. The villain scrambled the satellite radar, then released a drone swarm.
6. The villain scrambled the satellite radar, then activated a matrix key.
7. The villain locked down the vault doors, then released a drone swarm.
8. The villain hacked the orbital grid, then activated a matrix key.
9. The villain jammed the star database, then deployed a data shield.
10. The villain locked down the vault doors, then dropped a warp beacon.
11. The villain jammed the star database, then activated a matrix key.
12. The villain wiped the sector logs, then released a drone swarm.

Answer Key

Mystery of the Star Map Hijacker

Culprit: Pilot Leo

Sonic Decoder · Data Shield · Taps Left Foot · Neon Blue · EMP Burst

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE ROGUE HACKER DOES NOT USE A SIGNAL BOOSTER"

$2/10$ of 90 = 18 (T) · $2/6$ of 102 = 34 (K) · $4/5$ of 45 = 36 (R) · $1/3$ of 9 = 3 (G) · $4/6$ of 60 = 40 (C) · $1/4$ of 16 = 4 (A) · $3/6$ of 20 = 10 (E) · $1/8$ of 168 = 21 (N) · $3/10$ of 110 = 33 (L) · $2/6$ of 57 = 19 (S) · $2/8$ of 92 = 23 (H) · $5/10$ of 56 = 28 (U) · $1/8$ of 64 = 8 (B) · $1/5$ of 185 = 37 (D) · $2/8$ of 128 = 32 (I) · $2/8$ of 44 = 11 (O)

Clue 2 (Order of operations): "WITNESS SAW SUSPECT TAPPING LEFT FOOT"

$8 \times 9 - 6 = 66$ (W) · $18 + 2 \times 3 = 24$ (F) · $10 \times 8 - 16 = 64$ (N) · $5 \times 10 - 4 = 46$ (P) · $10 \times 7 - 21 = 49$ (C) · $2 + 2 \times 2 = 6$ (E) · $56 + 2 \times 7 = 70$ (S) · $3 + 3 \times 3 = 12$ (L) · $7 \times 10 - 10 = 60$ (A) · $4 \times 5 - 10 = 10$ (I) · $9 \times 8 - 30 = 42$ (O) · $12 + 2 \times 2 = 16$ (U) · $52 + 2 \times 8 = 68$ (G) · $17 + 2 \times 6 = 29$ (T)

Clue 3 (Multiplication facts (1-12)): "DETECTIVES USED EMP BURST TO BLOCK ESCAPE"

$7 \times 1 = 7$ (D) · $1 \times 9 = 9$ (I) · $10 \times 4 = 40$ (B) · $9 \times 10 = 90$ (R) · $3 \times 2 = 6$ (U) · $8 \times 8 = 64$ (A) · $11 \times 4 = 44$ (T) · $1 \times 5 = 5$ (S) · $10 \times 10 = 100$ (C) · $2 \times 1 = 2$ (L) · $11 \times 8 = 88$ (O) · $5 \times 9 = 45$ (M) · $1 \times 10 = 10$ (V) · $9 \times 7 = 63$ (K) · $7 \times 8 = 56$ (E) · $8 \times 10 = 80$ (P)

Clue 4 (Rounding): "A TRACE OF NEON BLUE GLOW WAS LEFT BEHIND"

Round 19 to the nearest ten = 20 (A) · Round 111 to the nearest ten = 110 (S) · Round 3,697 to the nearest hundred = 3700 (C) · Round 287 to the nearest ten = 290 (D) · Round 1,678 to the nearest hundred = 1700 (H) · Round 1,052 to the nearest hundred = 1100 (W) · Round 33 to the nearest ten = 30 (R) · Round 2,302 to the nearest hundred = 2300 (E) · Round 2,940 to the nearest hundred = 2900 (I) · Round 126 to the nearest ten = 130 (G) · Round 453 to the nearest hundred = 500 (B) · Round 173 to the nearest ten = 170 (F) · Round 4,271 to the nearest hundred = 4300 (U) · Round 4,557 to the nearest thousand = 5000 (N) · Round 426 to the nearest ten = 430 (O) · Round 86 to the nearest ten = 90 (L) · Round 51 to the nearest ten = 50 (T)

Clue 5 (Division facts (1-12)): surviving statement is box 9 → Pilot Leo

$20 \div 5 = 4$ · $96 \div 8 = 12$ · $40 \div 5 = 8$ · $1 \div 1 = 1$ · $33 \div 3 = 11$ · $110 \div 11 = 10$ · $56 \div 8 = 7$ · $2 \div 1 = 2$ · $48 \div 8 = 6$ · $30 \div 6 = 5$ · $15 \div 5 = 3$