



The Cosmic Crystal Caper

Grade 3 math · Addition, Subtraction, Multiplication, Rounding, Division · Reading level grades 1-2

Detective: _____ Date: _____

A sneaky space thief has stolen the glowing Power Crystal from the Cosmos Station! The Star Patrol needs your help to find the thief before they zoom away into deep space.

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 thief is _____

Possible suspects

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

NAME	SPACE TOOL	SPECIAL GEAR	SCANNER HAND	HAIR COLOR	WEAKNESS
Sally	rocket boots	stealth cloak	right-handed scanner	glow green hair	giant magnets
Yuri	laser blaster	stealth cloak	left-handed scanner	bright blue hair	giant magnets
Ellen	force field	metal claw	right-handed scanner	neon pink hair	giant magnets
Collins	rocket boots	radar visor	right-handed scanner	neon pink hair	giant magnets
Winston	force field	teleport pad	left-handed scanner	bright blue hair	giant magnets
Jessica	force field	stealth cloak	right-handed scanner	glow green hair	giant magnets
Mae	rocket boots	radar visor	left-handed scanner	bright blue hair	giant magnets
Chris	force field	metal claw	left-handed scanner	neon pink hair	strobe lights
James	shrink ray	teleport pad	left-handed scanner	glow green hair	strobe lights
Valentina	rocket boots	metal claw	right-handed scanner	bright blue hair	strobe lights
Charles	laser blaster	radar visor	right-handed scanner	glow green hair	sticky space foam
Buzz	rocket boots	jet pack	right-handed scanner	glow green hair	giant magnets
Victor	laser blaster	metal claw	right-handed scanner	bright blue hair	strobe lights
Neil	laser blaster	metal claw	right-handed scanner	bright blue hair	sticky space foam
John	rocket boots	radar visor	left-handed scanner	neon pink hair	giant magnets
Peggy	laser blaster	teleport pad	left-handed scanner	neon pink hair	giant magnets
Alan	gravity glove	stealth cloak	left-handed scanner	glow green hair	giant magnets
Sunita	gravity glove	radar visor	left-handed scanner	bright blue hair	strobe lights
Guy	laser blaster	metal claw	right-handed scanner	bright blue hair	giant magnets
Christina	shrink ray	metal claw	right-handed scanner	glow green hair	giant magnets
Michael	laser blaster	teleport pad	right-handed scanner	glow green hair	giant magnets

CLUE 1 Addition

Cadet Leo counts the glowing space boots. He adds two piles of boots together to find the sum. This gives us our first clue!

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

A horizontal number line starting at 0 and ending at 1000, with major tick marks every 100 units. Below the line are several boxes, each containing a number. Two boxes are highlighted in orange and labeled with the letter 'T'. The first orange box is at the position of 742, and the second orange box is at the position of 980.

Position	Number	Note
742	742	T
851	851	
980	980	T

$$509 + 233 = \boxed{} \rightarrow \boxed{\text{T}}$$

$367 + 493 = \boxed{} \rightarrow \boxed{\text{D}}$

$$294 + 242 = \boxed{} \rightarrow \boxed{}$$

$144 + 71 = \boxed{} \rightarrow \boxed{\text{N}}$

$120 + 147 = \boxed{} \rightarrow \boxed{\text{C}}$

$517 + 334 = \boxed{} \rightarrow \boxed{\text{E}}$

$$163 + 138 = \boxed{} \rightarrow \boxed{\text{K}}$$

$154 + 65 = \boxed{} \rightarrow \boxed{\text{L}}$

$$299 + 146 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$275 + 522 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$248 + 107 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$217 + 396 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$193 + 177 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$483 + 350 = \boxed{} \rightarrow \boxed{\text{J}}$$

$$171 + 279 = \boxed{} \rightarrow \boxed{\text{H}}$$

$149 + 234 = \boxed{} \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 2 Subtraction

There are fewer fuel tanks now. Cadet Leo subtracts the stolen tanks from the start total. The left-over number shows us where to look.

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

W																	
894	221	499	703	835	490	837	188	648	458	493	576	493	673	490	837	221	837

499	648	490	458	221	188	644	188	648	490	576	851

$1034 - 140 = \square \rightarrow \boxed{W}$

$256 - 68 = \square \rightarrow \boxed{R}$

$801 - 308 = \square \rightarrow \boxed{H}$

$1039 - 366 = \square \rightarrow \boxed{A}$

$729 - 271 = \square \rightarrow \boxed{G}$

$579 - 358 = \square \rightarrow \boxed{E}$

$601 - 102 = \square \rightarrow \boxed{F}$

$664 - 16 = \square \rightarrow \boxed{I}$

$944 - 241 = \square \rightarrow \boxed{O}$

$1107 - 270 = \square \rightarrow \boxed{D}$

$692 - 202 = \square \rightarrow \boxed{N}$

$904 - 328 = \square \rightarrow \boxed{T}$

$712 - 68 = \square \rightarrow \boxed{P}$

$891 - 56 = \square \rightarrow \boxed{U}$

$900 - 49 = \square \rightarrow \boxed{S}$

Scratch space:

CLUE 3

Multiplication facts (1-12)

The cargo deck has crates in neat rows. Cadet Leo multiplies the rows by the columns. This math shows us which screen to open.

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

T			T														
25	132	96	25	132	144	96	1	45	33	80	80	25	54	121	121	96	28

							T	
120	81	14	33	6	30	96	25	80

$5 \times 5 = \square \rightarrow \boxed{\text{T}}$

$11 \times 3 = \square \rightarrow \boxed{\text{A}}$

$9 \times 5 = \square \rightarrow \boxed{\text{W}}$

$12 \times 12 = \square \rightarrow \boxed{\text{I}}$

$2 \times 7 = \square \rightarrow \boxed{\text{M}}$

$9 \times 6 = \square \rightarrow \boxed{\text{O}}$

$2 \times 3 = \square \rightarrow \boxed{\text{G}}$

$10 \times 3 = \square \rightarrow \boxed{\text{N}}$

$8 \times 10 = \square \rightarrow \boxed{\text{S}}$

$1 \times 1 = \square \rightarrow \boxed{\text{F}}$

$7 \times 4 = \square \rightarrow \boxed{\text{D}}$

$9 \times 9 = \square \rightarrow \boxed{\text{Y}}$

$11 \times 11 = \square \rightarrow \boxed{\text{P}}$

$12 \times 11 = \square \rightarrow \boxed{\text{H}}$

$8 \times 12 = \square \rightarrow \boxed{\text{E}}$

$12 \times 10 = \square \rightarrow \boxed{\text{B}}$

Scratch space:

CLUE 4 Rounding

The radar screen only shows rounded numbers. Cadet Leo rounds the distance to the nearest ten. This gives us a secret clue.

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

W									W						
700	9000	4000	6000	8000	200	800	40	90	6000	700	40	500	9000	9000	200
50	300	7000	500	6000	200	5000	50	9000	30	50	300	7000	500		

Round 671 to the nearest hundred → **W**

Round 8,335 to the nearest thousand → **U**

Round 8,979 to the nearest thousand → **E**

Round 5,675 to the nearest thousand → **O**

Round 26 to the nearest ten → **C**

Round 37 to the nearest ten → **G**

Round 763 to the nearest hundred → **D**

Round 5,379 to the nearest thousand → **T**

Round 241 to the nearest hundred → **N**

Round 508 to the nearest hundred → **R**

Round 252 to the nearest hundred → **A**

Round 93 to the nearest ten → **L**

Round 6,912 to the nearest thousand → **I**

Round 3,897 to the nearest thousand → **F**

Round 49 to the nearest ten → **H**

Scratch space:

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

We have to share the moon rocks. Cadet Leo divides the rocks equally into space packs. The group size reveals the last 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:

$6 \div 3 = \boxed{}$

$42 \div 6 = \boxed{}$

$2 \div 2 = \boxed{}$

$45 \div 9 = \boxed{}$

$110 \div 11 = \boxed{}$

$88 \div 8 = \boxed{}$

$48 \div 12 = \boxed{}$

$72 \div 9 = \boxed{}$

$24 \div 8 = \boxed{}$

$36 \div 3 = \boxed{}$

$72 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain zooms past with rocket boots, then fades into the dark with a stealth cloak.
2. The villain blocks the alarm with a force field, then fades into the dark with a stealth cloak.
3. The villain lifts the safe with a gravity glove, then checks the halls with a radar visor.
4. The villain zooms past with rocket boots, then grabs the loot with a metal claw.
5. The villain blasts a lock with a laser blaster, then grabs the loot with a metal claw.
6. The villain blasts a lock with a laser blaster, then zaps away using a teleport pad.
7. The villain shrinks the vault door with a shrink ray, then grabs the loot with a metal claw.
8. The villain lifts the safe with a gravity glove, then zaps away using a teleport pad.
9. The villain blasts a lock with a laser blaster, then checks the halls with a radar visor.
10. The villain shrinks the vault door with a shrink ray, then zaps away using a teleport pad.
11. The villain blasts a lock with a laser blaster, then fades into the dark with a stealth cloak.
12. The villain zooms past with rocket boots, then flies up high using a jet pack.

Answer Key

The Cosmic Crystal Caper

Culprit: Michael

laser blaster · teleport pad · right-handed scanner · glow green hair · giant magnets

Trail: Start 21 → Clue 1 20 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT USE A JET PACK"

$509 + 233 = 742$ (T) · $367 + 493 = 860$ (D) · $294 + 242 = 536$ (I) · $144 + 71 = 215$ (N) · $120 + 147 = 267$ (C) · $517 + 334 = 851$ (E) · $163 + 138 = 301$ (K) · $154 + 65 = 219$ (L) · $299 + 146 = 445$ (O) · $275 + 522 = 797$ (U) · $248 + 107 = 355$ (A) · $217 + 396 = 613$ (P) · $193 + 177 = 370$ (V) · $483 + 350 = 833$ (J) · $171 + 279 = 450$ (H) · $149 + 234 = 383$ (S)

Clue 2 (Subtraction): "WE FOUND RIGHT HANDED FINGERPRINTS"

$1034 - 140 = 894$ (W) · $256 - 68 = 188$ (R) · $801 - 308 = 493$ (H) · $1039 - 366 = 673$ (A) · $729 - 271 = 458$ (G) · $579 - 358 = 221$ (E) · $601 - 102 = 499$ (F) · $664 - 16 = 648$ (I) · $944 - 241 = 703$ (O) · $1107 - 270 = 837$ (D) · $692 - 202 = 490$ (N) · $904 - 328 = 576$ (T) · $712 - 68 = 644$ (P) · $891 - 56 = 835$ (U) · $900 - 49 = 851$ (S)

Clue 3 (Multiplication facts (1-12)): "THE THIEF WAS STOPPED BY MAGNETS"

$5 \times 5 = 25$ (T) · $11 \times 3 = 33$ (A) · $9 \times 5 = 45$ (W) · $12 \times 12 = 144$ (I) · $2 \times 7 = 14$ (M) · $9 \times 6 = 54$ (O) · $2 \times 3 = 6$ (G) · $10 \times 3 = 30$ (N) · $8 \times 10 = 80$ (S) · $1 \times 1 = 1$ (F) · $7 \times 4 = 28$ (D) · $9 \times 9 = 81$ (Y) · $11 \times 11 = 121$ (P) · $12 \times 11 = 132$ (H) · $8 \times 12 = 96$ (E) · $12 \times 10 = 120$ (B)

Clue 4 (Rounding): "WE FOUND GLOW GREEN HAIR ON THE CHAIR"

Round 671 to the nearest hundred = 700 (W) · Round 8,335 to the nearest thousand = 8000 (U) · Round 8,979 to the nearest thousand = 9000 (E) · Round 5,675 to the nearest thousand = 6000 (O) · Round 26 to the nearest ten = 30 (C) · Round 37 to the nearest ten = 40 (G) · Round 763 to the nearest hundred = 800 (D) · Round 5,379 to the nearest thousand = 5000 (T) · Round 241 to the nearest hundred = 200 (N) · Round 508 to the nearest hundred = 500 (R) · Round 252 to the nearest hundred = 300 (A) · Round 93 to the nearest ten = 90 (L) · Round 6,912 to the nearest thousand = 7000 (I) · Round 3,897 to the nearest thousand = 4000 (F) · Round 49 to the nearest ten = 50 (H)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Michael

$6 \div 3 = 2$ · $42 \div 6 = 7$ · $2 \div 2 = 1$ · $45 \div 9 = 5$ · $110 \div 11 = 10$ · $88 \div 8 = 11$ · $48 \div 12 = 4$ · $72 \div 9 = 8$ · $24 \div 8 = 3$ · $36 \div 3 = 12$ · $72 \div 8 = 9$