



The Cosmic Map Caper

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

Detective: _____ Date: _____

Ahoy, Space Rangers! The legendary cosmic treasure map has been swiped from the Chief Star-Cartographer's high-tech locker! A Rogue Captain did it. We must track down which space pirate took it before they jump to hyperspace!

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 Captain is _____

Possible suspects

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

NAME	SHIP WEAPON	TARGET TRACKER	SHIP CONTROLS	SPACESUIT VISOR	LOOT VULNERABILITY
Halley Hooks	Gravity Net	Wormhole Radar	Right-handed joystick	Neon green tint	Scared of space squids
Salty Saturn	Plasma Cannon	Starlight Scope	Left-handed joystick	Gold foil tint	Distracted by shiny meteors
Captain Celeste	Solar Beam	Asteroid Sensor	Left-handed joystick	Neon green tint	Slowed by heavy cosmic gold
Rusty Rocket	Laser Harpoon	Asteroid Sensor	Left-handed joystick	Gold foil tint	Scared of space squids
Comet Kidd	Solar Beam	Asteroid Sensor	Right-handed joystick	Gold foil tint	Scared of space squids
Astro Anne	EMP Blaster	Comet Tracker	Right-handed joystick	Neon green tint	Scared of space squids
Zelda Zenith	Plasma Cannon	Wormhole Radar	Left-handed joystick	Neon green tint	Scared of space squids
Orion Blackbeard	Laser Harpoon	Wormhole Radar	Right-handed joystick	Neon green tint	Distracted by shiny meteors
Captain Void	Gravity Net	Comet Tracker	Right-handed joystick	Gold foil tint	Distracted by shiny meteors
Captain Cosmo	Laser Harpoon	Wormhole Radar	Right-handed joystick	Neon green tint	Slowed by heavy cosmic gold
Marina Mars	EMP Blaster	Wormhole Radar	Right-handed joystick	Gold foil tint	Slowed by heavy cosmic gold
Starboard Sally	Laser Harpoon	Starlight Scope	Left-handed joystick	Neon green tint	Scared of space squids
Vega Vance	Solar Beam	Nebula Scanner	Right-handed joystick	Neon green tint	Scared of space squids
Rigel Rogers	Plasma Cannon	Asteroid Sensor	Left-handed joystick	Gold foil tint	Scared of space squids
Nebula Ned	Laser Harpoon	Wormhole Radar	Left-handed joystick	Neon green tint	Scared of space squids
Pegleg Pluto	Plasma Cannon	Starlight Scope	Right-handed joystick	Gold foil tint	Slowed by heavy cosmic gold
Patchy Proton	Gravity Net	Asteroid Sensor	Left-handed joystick	Neon green tint	Distracted by shiny meteors
Cosmos Hook	EMP Blaster	Wormhole Radar	Right-handed joystick	Deep blue tint	Scared of space squids
Laser Lucy	Gravity Net	Comet Tracker	Left-handed joystick	Neon green tint	Scared of space squids
Stella Swift	Laser Harpoon	Nebula Scanner	Left-handed joystick	Neon green tint	Scared of space squids
Drake Kepler	Solar Beam	Asteroid Sensor	Left-handed joystick	Deep blue tint	Slowed by heavy cosmic gold

CLUE 1

To unlock the locked captain log, we need to read the screen. Finding the place value of the digits in the engine warp code will help us break the digital seal.

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

What is the value of the 5 in 3,850? → **T**

What is the value of the 6 in 4,603? → **A**

What is the value of the 4 in 3,452? → **L**

What is the value of the 3 in 53,428? → **P**

What is the value of the 3 in 386? → **0**

What is the value of the 5 in 591? → **C**

What is the value of the 3 in 739? → **U**

What is the value of the 5 in 35,171? → **R**

What is the value of the 4 in 148? → **G**

What is the value of the 6 in 76,593? → **N**

What is the value of the 1 in 157? → **S**

What is the value of the 9 in 5,593? → **V**

What is the value of the 9 in 89,207? → **D**

What is the value of the 7 in 574? → **H**

What is the value of the 4 in 74,758? → **E**

What is the value of the 2 in 9,120? →

Scratch space:

CLUE 2 Rounding

Our long-range radar is a bit fuzzy after the blast. It rounds all spaceship distances to the nearest ten space miles, but we can still estimate which way they went.

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

T								T											T
20	9000	1300	130	110	90	2000	20	1300	4300	7000	1300	3000	2000	1700	1300	1100	20		
										T									
9000	2000	30	3000	1300	3000	430	370	5000	7000	20	110	500	2300						

Round 21 to the nearest ten → **T**

Round 5,107 to the nearest thousand → **Y**

Round 434 to the nearest ten → **J**

Round 2,460 to the nearest thousand → **A**

Round 6,926 to the nearest thousand → **S**

Round 1,057 to the nearest hundred → **F**

Round 114 to the nearest ten → **I**

Round 134 to the nearest ten → **P**

Round 8,558 to the nearest thousand → **H**

Round 1,718 to the nearest hundred → **L**

Round 526 to the nearest hundred → **C**

Round 89 to the nearest ten → **R**

Round 1,324 to the nearest hundred → **E**

Round 2,603 to the nearest thousand → **D**

Round 2,268 to the nearest hundred → **K**

Round 374 to the nearest ten → **O**

Round 26 to the nearest ten → **N**

Round 4,285 to the nearest hundred → **U**

Scratch space:

CLUE 3 Addition

Let us count the laser power cells left on the loading dock. Adding up the crate totals in each storage bay will tell us exactly how much gear was stolen.

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

T																	
8249	4572	3675	9136	9747	4143	4143	5407	9747	5826	3836	5407	5826	5407	9108	5407	7883	
7889	3836	6029	4905	5407	6061	6692	5407	9463	3675	6061	8558	6695	9747	4566			

$5418 + 2831 = \square \rightarrow$ T	$3623 + 4935 = \square \rightarrow$ Q	$3297 + 2764 = \square \rightarrow$ S
$3013 + 1559 = \square \rightarrow$ H	$2744 + 2663 = \square \rightarrow$ A	$4884 + 2999 = \square \rightarrow$ Y
$5077 + 4059 = \square \rightarrow$ V	$2450 + 1386 = \square \rightarrow$ R	$1378 + 2765 = \square \rightarrow$ L
$1435 + 3131 = \square \rightarrow$ D	$2581 + 3448 = \square \rightarrow$ O	$1382 + 2293 = \square \rightarrow$ E
$4360 + 5103 = \square \rightarrow$ C	$3121 + 1784 = \square \rightarrow$ M	$3633 + 5475 = \square \rightarrow$ W
$4160 + 2532 = \square \rightarrow$ P	$3344 + 4545 = \square \rightarrow$ F	$2879 + 2947 = \square \rightarrow$ N
$3961 + 5786 = \square \rightarrow$ I	$2943 + 3752 = \square \rightarrow$ U	

Scratch space:

CLUE 4 Subtraction

The pirate ship is too heavy to catch up quickly. We must subtract the weight of the water barrels from our cargo to speed up our ship rocket boosters.

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

T																			
4398	2075	2580	7106	6849	7106	2781	3596	5012	4398	2075	3123	1269	7554	5995	6849	2392	5012	6644	7554

7554	5805	2580	2580	6644	5805	2580	2257	5995	2580	7106	4398	5012	6849	6644	2597				

$6698 - 2300 = \square \rightarrow \text{T}$	$8031 - 4435 = \square \rightarrow \text{P}$	$7730 - 881 = \square \rightarrow \text{O}$
$9127 - 2483 = \square \rightarrow \text{N}$	$7176 - 4579 = \square \rightarrow \text{S}$	$5183 - 2791 = \square \rightarrow \text{W}$
$3726 - 1146 = \square \rightarrow \text{E}$	$3374 - 593 = \square \rightarrow \text{K}$	$3983 - 1726 = \square \rightarrow \text{F}$
$8539 - 3527 = \square \rightarrow \text{I}$	$9793 - 2239 = \square \rightarrow \text{G}$	$1775 - 506 = \square \rightarrow \text{D}$
$10462 - 4467 = \square \rightarrow \text{L}$	$9176 - 2070 = \square \rightarrow \text{C}$	$7655 - 1850 = \square \rightarrow \text{R}$
$6523 - 4448 = \square \rightarrow \text{H}$	$7547 - 4424 = \square \rightarrow \text{A}$	

Scratch space:

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

The young space cadets need to share the remaining glow-berries equally. Dividing them up will keep everyone happy and alert during our search.

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:

$66 \div 6 = \boxed{}$

$9 \div 1 = \boxed{}$

$24 \div 3 = \boxed{}$

$24 \div 2 = \boxed{}$

$20 \div 2 = \boxed{}$

$24 \div 4 = \boxed{}$

$25 \div 5 = \boxed{}$

$16 \div 4 = \boxed{}$

$7 \div 7 = \boxed{}$

$14 \div 2 = \boxed{}$

$24 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain fired a plasma cannon, then turned on the comet tracker.
2. The villain threw a gravity net, then scanned the asteroid sensor.
3. The villain fired a plasma cannon, then checked the wormhole radar.
4. The villain shot an emp blaster, then booted up the nebula scanner.
5. The villain threw a gravity net, then checked the wormhole radar.
6. The villain beamed a solar beam, then peered through the starlight scope.
7. The villain shot an emp blaster, then peered through the starlight scope.
8. The villain launched a laser harpoon, then checked the wormhole radar.
9. The villain launched a laser harpoon, then booted up the nebula scanner.
10. The villain fired a plasma cannon, then peered through the starlight scope.
11. The villain threw a gravity net, then turned on the comet tracker.
12. The villain shot an emp blaster, then scanned the asteroid sensor.

Answer Key

The Cosmic Map Caper

Culprit: Zelda Zenith

Plasma Cannon · Wormhole Radar · Left-handed joystick · Neon green tint · Scared of space squids

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE STARLIGHT SCOPE"

What is the value of the 5 in 3,850? = 50 (T) · What is the value of the 6 in 4,603? = 600 (A) · What is the value of the 4 in 3,452? = 400 (L) · What is the value of the 3 in 53,428? = 3000 (P) · What is the value of the 3 in 386? = 300 (O) · What is the value of the 5 in 591? = 500 (C) · What is the value of the 3 in 739? = 30 (U) · What is the value of the 5 in 35,171? = 5000 (R) · What is the value of the 4 in 148? = 40 (G) · What is the value of the 6 in 76,593? = 6000 (N) · What is the value of the 1 in 157? = 100 (S) · What is the value of the 9 in 5,593? = 90 (V) · What is the value of the 9 in 89,207? = 9000 (D) · What is the value of the 7 in 574? = 70 (H) · What is the value of the 4 in 74,758? = 4000 (E) · What is the value of the 2 in 9,120? = 20 (I)

Clue 2 (Rounding): "THE PIRATE USED A LEFT HANDED JOYSTICK"

Round 21 to the nearest ten = 20 (T) · Round 5,107 to the nearest thousand = 5000 (Y) · Round 434 to the nearest ten = 430 (J) · Round 2,460 to the nearest thousand = 2000 (A) · Round 6,926 to the nearest thousand = 7000 (S) · Round 1,057 to the nearest hundred = 1100 (F) · Round 114 to the nearest ten = 110 (I) · Round 134 to the nearest ten = 130 (P) · Round 8,558 to the nearest thousand = 9000 (H) · Round 1,718 to the nearest hundred = 1700 (L) · Round 526 to the nearest hundred = 500 (C) · Round 89 to the nearest ten = 90 (R) · Round 1,324 to the nearest hundred = 1300 (E) · Round 2,603 to the nearest thousand = 3000 (D) · Round 2,268 to the nearest hundred = 2300 (K) · Round 374 to the nearest ten = 370 (O) · Round 26 to the nearest ten = 30 (N) · Round 4,285 to the nearest hundred = 4300 (U)

Clue 3 (Addition): "THE VILLAIN RAN AWAY FROM A SPACE SQUID"

5418 + 2831 = 8249 (T) · 3623 + 4935 = 8558 (Q) · 3297 + 2764 = 6061 (S) · 3013 + 1559 = 4572 (H) · 2744 + 2663 = 5407 (A) · 4884 + 2999 = 7883 (Y) · 5077 + 4059 = 9136 (V) · 2450 + 1386 = 3836 (R) · 1378 + 2765 = 4143 (L) · 1435 + 3131 = 4566 (D) · 2581 + 3448 = 6029 (O) · 1382 + 2293 = 3675 (E) · 4360 + 5103 = 9463 (C) · 3121 + 1784 = 4905 (M) · 3633 + 5475 = 9108 (W) · 4160 + 2532 = 6692 (P) · 3344 + 4545 = 7889 (F) · 2879 + 2947 = 5826 (N) · 3961 + 5786 = 9747 (I) · 2943 + 3752 = 6695 (U)

Clue 4 (Subtraction): "THE COCKPIT HAD GLOWING GREEN REFLECTIONS"

6698 - 2300 = 4398 (T) · 8031 - 4435 = 3596 (P) · 7730 - 881 = 6849 (O) · 9127 - 2483 = 6644 (N) · 7176 - 4579 = 2597 (S) · 5183 - 2791 = 2392 (W) · 3726 - 1146 = 2580 (E) · 3374 - 593 = 2781 (K) · 3983 - 1726 = 2257 (F) · 8539 - 3527 = 5012 (I) · 9793 - 2239 = 7554 (G) · 1775 - 506 = 1269 (D) · 10462 - 4467 = 5995 (L) · 9176 - 2070 = 7106 (C) · 7655 - 1850 = 5805 (R) · 6523 - 4448 = 2075 (H) · 7547 - 4424 = 3123 (A)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Zelda Zenith

66 ÷ 6 = 11 · 9 ÷ 1 = 9 · 24 ÷ 3 = 8 · 24 ÷ 2 = 12 · 20 ÷ 2 = 10 · 24 ÷ 4 = 6 · 25 ÷ 5 = 5 · 16 ÷ 4 = 4 · 7 ÷ 7 = 1 · 14 ÷ 2 = 7 · 24 ÷ 12 = 2