



The Cosmic Code Sabotage

Grade 5 math · Rounding, Place value, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Oh no! A rogue astro-bot has scrambled the flight coordinates on the Starship Nebula-Nine! The Chief Officer of Star-Maps cannot guide the ship home without your help. We have a list of twenty-four space travelers on board, but one of them is the disguised rogue bot. Use your cosmic math skills to decode the clues and find the culprit!

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 Astro-Bot is _____

Possible suspects

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

NAME	JETPACK UPGRADES	COSMIC GADGETS	OXYGEN METER PLACEMENT	SPACESUIT HELMET VISORS	SYSTEM REBOOT FLAWS
Stella Spark	Quantum Teleport Drive	Starlight Sensor Antenna	Right Shoulder Meter	Deep Purple Visor	Static Electricity
Mae Jemison	Magnetic Hover Pads	Plasma Torch Glove	Right Shoulder Meter	Neon Blue Visor	Static Electricity
Comet Cara	Super Rocket Boosters	Starlight Sensor Antenna	Right Shoulder Meter	Mirror Gold Visor	Intense Solar Flares
Dr Luna	Quantum Teleport Drive	Asteroid Cracker Grip	Left Shoulder Meter	Deep Purple Visor	Static Electricity
Captain Nova	Laser Mining Beam	Asteroid Cracker Grip	Left Shoulder Meter	Neon Blue Visor	Intense Solar Flares
Yuri Gagarin	Gravity Defier Boots	Asteroid Cracker Grip	Right Shoulder Meter	Deep Purple Visor	Stardust Dusting
Neil Armstrong	Quantum Teleport Drive	Plasma Torch Glove	Left Shoulder Meter	Deep Purple Visor	Static Electricity
Sally Ride	Magnetic Hover Pads	Freeze Beam Ray	Right Shoulder Meter	Mirror Gold Visor	Intense Solar Flares
John Glenn	Quantum Teleport Drive	Freeze Beam Ray	Right Shoulder Meter	Mirror Gold Visor	Intense Solar Flares
Kalpana Chawla	Laser Mining Beam	Asteroid Cracker Grip	Right Shoulder Meter	Neon Blue Visor	Stardust Dusting
Astro Leo	Magnetic Hover Pads	Freeze Beam Ray	Right Shoulder Meter	Deep Purple Visor	Static Electricity
Ranger Kira	Gravity Defier Boots	Asteroid Cracker Grip	Left Shoulder Meter	Mirror Gold Visor	Stardust Dusting
Orion Jax	Super Rocket Boosters	Plasma Torch Glove	Right Shoulder Meter	Mirror Gold Visor	Intense Solar Flares
Guy Bluford	Quantum Teleport Drive	Asteroid Cracker Grip	Right Shoulder Meter	Deep Purple Visor	Static Electricity
Nebula Ned	Super Rocket Boosters	Solar Ray Shield	Right Shoulder Meter	Neon Blue Visor	Static Electricity
Radar Roy	Laser Mining Beam	Starlight Sensor Antenna	Left Shoulder Meter	Mirror Gold Visor	Static Electricity
Buzz Aldrin	Laser Mining Beam	Starlight Sensor Antenna	Right Shoulder Meter	Neon Blue Visor	Static Electricity
Chris Hadfield	Gravity Defier Boots	Freeze Beam Ray	Right Shoulder Meter	Mirror Gold Visor	Static Electricity
Commander Sol	Quantum Teleport Drive	Solar Ray Shield	Right Shoulder Meter	Deep Purple Visor	Static Electricity
Valentina Tereshkova	Super Rocket Boosters	Solar Ray Shield	Right Shoulder Meter	Neon Blue Visor	Intense Solar Flares
Pilot Zephyr	Magnetic Hover Pads	Starlight Sensor Antenna	Right Shoulder Meter	Deep Purple Visor	Static Electricity

CLUE 1 Rounding

The radar screen is fuzzy and only displays rounded numbers. Round the cosmic distance to see where the rogue bot was spotted.

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

T									T								T
4300	170	130	2900	1100	20	900	130	30	1100	4300	200	1100	130	2000	90	1100	4300
900	2000	130	290	3700	2900	130	130	2300	130	30	130	290	700				

Round 4,274 to the nearest hundred →

T

Round 173 to the nearest ten →

H

Round 868 to the nearest hundred →

U

Round 92 to the nearest ten →

N

Round 2,304 to the nearest hundred →

Z

Round 691 to the nearest hundred →

M

Round 34 to the nearest ten →

B

Round 289 to the nearest ten →

A

Round 248 to the nearest hundred →

D

Round 2,872 to the nearest hundred →

R

Round 3,675 to the nearest hundred →

F

Round 20 to the nearest ten →

G

Round 1,119 to the nearest hundred →

O

Round 133 to the nearest ten →

E

Round 2,184 to the nearest thousand →

S

Scratch space:

CLUE 2 Place value

The ship computer has a digit code based on place value. Find the hidden number to unlock the second camera log.

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

T																	
7000	4000	2000	1000	10	900	4000	7000	5000	4000	30	50	6000	8000	2000	1000		

		T															T
600	2000	7000	2000	1000	60	6000	400	5000	4000	2000	5000	300	1000	10	900	4000	7000

What is the value of the 7 in 267,138? → **T**

What is the value of the 4 in 263,450? → **A**

What is the value of the 1 in 734,415? → **I**

What is the value of the 8 in 48,604? → **D**

What is the value of the 5 in 15,793? → **S**

What is the value of the 3 in 777,320? → **B**

What is the value of the 5 in 83,357? → **U**

What is the value of the 3 in 69,439? → **O**

What is the value of the 6 in 80,622? → **M**

What is the value of the 6 in 19,364? → **F**

What is the value of the 1 in 441,995? → **R**

What is the value of the 9 in 68,936? → **G**

What is the value of the 2 in 92,050? → **E**

What is the value of the 6 in 136,884? → **L**

What is the value of the 4 in 24,098? → **H**

Scratch space:

CLUE 3 Addition

The captain counts the total number of energy batteries on the cargo deck. Add the supplies together to unlock the next file.

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

S																	
8648	7263	9380	7263	9557	9355	5870	7178	5870	9355	7263	4750	9557	9355	9557	7263	7574	

				S												
9355	4008	4008	7178	8648	7263	6647	5870	5014	4008	7263	4359	4008	2559	8145		

$4056 + 4592 = \square \rightarrow$ S	$6532 + 2823 = \square \rightarrow$ C	$3699 + 4446 = \square \rightarrow$ N
$3802 + 2068 = \square \rightarrow$ E	$4858 + 2320 = \square \rightarrow$ L	$2340 + 2019 = \square \rightarrow$ D
$2668 + 2346 = \square \rightarrow$ B	$1679 + 3071 = \square \rightarrow$ R	$6080 + 3300 = \square \rightarrow$ A
$2705 + 4558 = \square \rightarrow$ T	$1490 + 1069 = \square \rightarrow$ W	$1673 + 2335 = \square \rightarrow$ O
$4281 + 2366 = \square \rightarrow$ H	$3851 + 3723 = \square \rightarrow$ Y	$6189 + 3368 = \square \rightarrow$ I

Scratch space:

CLUE 4

Subtraction

A fuel leak drained some power cells from our reserve tank. Subtract the lost fuel to find out how much power is left.

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

D														
7378	3872	3872	6127	6127	5790	7390	6127	6441	3872	3824	6441	7773	3194	3194
8901	7386	4805	3872	7390	3194	1085	8277	3872	3872	3583	3872	3194		

$11312 - 3934 = \square \rightarrow \boxed{\text{D}}$

$6230 - 2406 = \square \rightarrow \boxed{\text{G}}$

$9137 - 4332 = \square \rightarrow \boxed{\text{V}}$

$7914 - 1473 = \square \rightarrow \boxed{\text{L}}$

$9128 - 3338 = \square \rightarrow \boxed{\text{U}}$

$8052 - 1925 = \square \rightarrow \boxed{\text{P}}$

$5853 - 4768 = \square \rightarrow \boxed{\text{T}}$

$11243 - 2342 = \square \rightarrow \boxed{\text{C}}$

$3910 - 38 = \square \rightarrow \boxed{\text{E}}$

$4622 - 1039 = \square \rightarrow \boxed{\text{Y}}$

$7020 - 3826 = \square \rightarrow \boxed{\text{S}}$

$11670 - 4280 = \square \rightarrow \boxed{\text{R}}$

$11011 - 3238 = \square \rightarrow \boxed{\text{A}}$

$9442 - 1165 = \square \rightarrow \boxed{\text{H}}$

$11251 - 3865 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

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

The crew splits the star-maps into equal groups for the search teams. Divide the maps to find the final coordinate.

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:

$132 \div 11 = \boxed{}$

$16 \div 2 = \boxed{}$

$90 \div 10 = \boxed{}$

$50 \div 5 = \boxed{}$

$35 \div 7 = \boxed{}$

$56 \div 8 = \boxed{}$

$20 \div 10 = \boxed{}$

$121 \div 11 = \boxed{}$

$8 \div 2 = \boxed{}$

$33 \div 11 = \boxed{}$

$12 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain teleports through security shields, then scans for guards using a starlight antenna.
2. The villain blasts off with super rocket boosters, then freezes control panels with a cold beam.
3. The villain teleports through security shields, then melts the locks using a plasma glove.
4. The villain blasts off with super rocket boosters, then scans for guards using a starlight antenna.
5. The villain floats over walls with gravity boots, then melts the locks using a plasma glove.
6. The villain blasts off with super rocket boosters, then blocks pursuit with a solar shield.
7. The villain floats over walls with gravity boots, then smashes escape hatches with a heavy grip.
8. The villain skates silently on magnetic pads, then scans for guards using a starlight antenna.
9. The villain teleports through security shields, then smashes escape hatches with a heavy grip.
10. The villain skates silently on magnetic pads, then freezes control panels with a cold beam.
11. The villain floats over walls with gravity boots, then blocks pursuit with a solar shield.
12. The villain teleports through security shields, then blocks pursuit with a solar shield.

Answer Key

The Cosmic Code Sabotage

Culprit: Stella Spark

Quantum Teleport Drive · Starlight Sensor Antenna · Right Shoulder Meter · Deep Purple Visor · Static Electricity

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE ROGUE BOT DOES NOT USE A FREEZE BEAM"

Round 4,274 to the nearest hundred = 4300 (T) · Round 173 to the nearest ten = 170 (H) · Round 868 to the nearest hundred = 900 (U) · Round 92 to the nearest ten = 90 (N) · Round 2,304 to the nearest hundred = 2300 (Z) · Round 691 to the nearest hundred = 700 (M) · Round 34 to the nearest ten = 30 (B) · Round 289 to the nearest ten = 290 (A) · Round 248 to the nearest hundred = 200 (D) · Round 2,872 to the nearest hundred = 2900 (R) · Round 3,675 to the nearest hundred = 3700 (F) · Round 20 to the nearest ten = 20 (G) · Round 1,119 to the nearest hundred = 1100 (O) · Round 133 to the nearest ten = 130 (E) · Round 2,184 to the nearest thousand = 2000 (S)

Clue 2 (Place value): "THE RIGHT SHOULDER METER FLASHES BRIGHT"

What is the value of the 7 in 267,138? = 7000 (T) · What is the value of the 4 in 263,450? = 400 (A) · What is the value of the 1 in 734,415? = 10 (I) · What is the value of the 8 in 48,604? = 8000 (D) · What is the value of the 5 in 15,793? = 5000 (S) · What is the value of the 3 in 777,320? = 300 (B) · What is the value of the 5 in 83,357? = 50 (U) · What is the value of the 3 in 69,439? = 30 (O) · What is the value of the 6 in 80,622? = 600 (M) · What is the value of the 6 in 19,364? = 60 (F) · What is the value of the 1 in 441,995? = 1000 (R) · What is the value of the 9 in 68,936? = 900 (G) · What is the value of the 2 in 92,050? = 2000 (E) · What is the value of the 6 in 136,884? = 6000 (L) · What is the value of the 4 in 24,098? = 4000 (H)

Clue 3 (Addition): "STATIC ELECTRICITY COOLS THE BOT DOWN"

4056 + 4592 = 8648 (S) · 6532 + 2823 = 9355 (C) · 3699 + 4446 = 8145 (N) · 3802 + 2068 = 5870 (E) · 4858 + 2320 = 7178 (L) · 2340 + 2019 = 4359 (D) · 2668 + 2346 = 5014 (B) · 1679 + 3071 = 4750 (R) · 6080 + 3300 = 9380 (A) · 2705 + 4558 = 7263 (T) · 1490 + 1069 = 2559 (W) · 1673 + 2335 = 4008 (O) · 4281 + 2366 = 6647 (H) · 3851 + 3723 = 7574 (Y) · 6189 + 3368 = 9557 (I)

Clue 4 (Subtraction): "DEEP PURPLE GLASS COVERS THE EYES"

11312 - 3934 = 7378 (D) · 6230 - 2406 = 3824 (G) · 9137 - 4332 = 4805 (V) · 7914 - 1473 = 6441 (L) · 9128 - 3338 = 5790 (U) · 8052 - 1925 = 6127 (P) · 5853 - 4768 = 1085 (T) · 11243 - 2342 = 8901 (C) · 3910 - 38 = 3872 (E) · 4622 - 1039 = 3583 (Y) · 7020 - 3826 = 3194 (S) · 11670 - 4280 = 7390 (R) · 11011 - 3238 = 7773 (A) · 9442 - 1165 = 8277 (H) · 11251 - 3865 = 7366 (O)

Clue 5 (Division facts (1-12)): surviving statement is box 1 → Stella Spark

132 ÷ 11 = 12 · 16 ÷ 2 = 8 · 90 ÷ 10 = 9 · 50 ÷ 5 = 10 · 35 ÷ 7 = 5 · 56 ÷ 8 = 7 · 20 ÷ 10 = 2 · 121 ÷ 11 = 11 · 8 ÷ 2 = 4 · 33 ÷ 11 = 3 · 12 ÷ 2 = 6