



The Galactic Nebula Heist

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

Detective: _____ Date: _____

Oh no! A sneaky Space Bandit has snuck onto the Ares Research Station. They stole the secret star charts! Our Station Commander needs your help to crack the codes, track the thief through the asteroid belt, and bring back the charts before the rocket launches.

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 Bandit is _____

Possible suspects

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

NAME	JETPACK ENGINE	SPECIAL TOOL	PILOT HAND	VISOR GLOW	THIEF WEAKNESS
Pete Conrad	Laser Welder	Sonic Wave	Right-handed pilot	Bright Orange Visor	Space Dust
Kalpana Chawla	Solar Sails	Force Field	Right-handed pilot	Neon Blue Visor	Static Sparks
Peggy Whitson	Gravity Boots	Ice Beam	Right-handed pilot	Bright Orange Visor	Static Sparks
Jim Lovell	Warp Engine	Force Field	Left-handed pilot	Bright Orange Visor	Static Sparks
Neil Armstrong	Gravity Boots	Force Field	Right-handed pilot	Bright Orange Visor	Static Sparks
Michael Collins	Laser Welder	Cloaking Device	Right-handed pilot	Bright Orange Visor	Static Sparks
Tim Peake	Warp Engine	Magnetic Grip	Right-handed pilot	Bright Orange Visor	Static Sparks
Sunita Williams	Gravity Boots	Cloaking Device	Left-handed pilot	Neon Blue Visor	Magnet fields
Mark Kelly	Solar Sails	Force Field	Right-handed pilot	Bright Orange Visor	Space Dust
Al Worden	Warp Engine	Ice Beam	Left-handed pilot	Acid Green Visor	Static Sparks
Gene Cernan	Gravity Boots	Force Field	Left-handed pilot	Acid Green Visor	Space Dust
Sally Ride	Gravity Boots	Sonic Wave	Left-handed pilot	Neon Blue Visor	Magnet fields
Samantha Cristoforetti	Plasma Thruster	Force Field	Left-handed pilot	Neon Blue Visor	Space Dust
Guy Bluford	Laser Welder	Force Field	Left-handed pilot	Bright Orange Visor	Static Sparks
Scott Kelly	Plasma Thruster	Sonic Wave	Right-handed pilot	Bright Orange Visor	Magnet fields
Ellen Ochoa	Gravity Boots	Magnetic Grip	Right-handed pilot	Bright Orange Visor	Magnet fields
Buzz Aldrin	Gravity Boots	Cloaking Device	Right-handed pilot	Acid Green Visor	Space Dust
Valentina Tereshkova	Laser Welder	Force Field	Left-handed pilot	Neon Blue Visor	Magnet fields
Yuri Gagarin	Laser Welder	Cloaking Device	Right-handed pilot	Acid Green Visor	Static Sparks
Mae Jemison	Plasma Thruster	Sonic Wave	Right-handed pilot	Bright Orange Visor	Static Sparks
John Glenn	Solar Sails	Magnetic Grip	Left-handed pilot	Neon Blue Visor	Static Sparks

Multiplication facts (1-12)

We checked the solar panel grid. The panels are set up in neat rows and columns. We must multiply them to find the total power score.

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

16 63 64 22 24 81 1 11 16 1 60 64 30 81 60 16 44 30 64

16 63 64 11 21 64 22 64 24 120

$$4 \times 4 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$7 \times 9 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$5 \times 6 = \boxed{} \rightarrow \boxed{\text{S}}$$

$1 \times 1 = \boxed{} \rightarrow \boxed{\text{D}}$

$10 \times 12 = \square \rightarrow \mathbf{M}$

$1 \times 11 = \boxed{} \rightarrow \boxed{1}$

$11 \times 2 = \square \rightarrow \mathbf{B}$

$3 \times 7 = \square \rightarrow \mathbf{C}$

$$10 \times 6 = \boxed{} \rightarrow \boxed{0}$$

$$9 \times 9 = \boxed{} \rightarrow \boxed{\text{N}}$$

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

$$3 \times 8 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$11 \times 4 = \boxed{} \rightarrow \boxed{\text{U}}$$

Scratch space:

CLUE 2

The computer screen is damaged. It only shows the ship distance rounded to the nearest ten. We need to find the real number.

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

Diagram illustrating the distribution of 10000 items across 16 categories. The categories are represented by boxes with values below them. Two boxes are highlighted with an orange background and a 'T' label, representing the top 2 categories.

Category	Value	Label
1	9000	T
2	2000	
3	1100	
4	5000	
5	3700	
6	900	
7	2000	
8	9000	T
9	2000	
10	1300	
11	290	
12	200	
13	1100	
14	200	
15	2300	
16	9000	T

Round 9,289 to the nearest thousand $\rightarrow$ **T**

Round 434 to the nearest ten $\rightarrow$ **C**

Round 288 to the nearest ten $\rightarrow$ **N**

Round 1,126 to the nearest hundred $\rightarrow$ **E**

Round 213 to the nearest hundred $\rightarrow$ **D**

Round 4,950 to the nearest thousand $\rightarrow$ **R**

Round 114 to the nearest ten $\rightarrow$ **L**

Round 4,338 to the nearest hundred $\rightarrow$ **W**

Round 2,261 to the nearest hundred → **S**

Round 1,277 to the nearest hundred → **A**

Round 2,391 to the nearest thousand $\rightarrow$ **H**

Round 916 to the nearest hundred → **G**

Round 30 to the nearest ten →

Round 3,653 to the nearest hundred $\rightarrow$

Scratch space:

CLUE 3 Addition

Our team gathered the loose space rocks found near the crime scene. We must add up all the small piles to find the total weight.

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

T			T							T							
5392	9167	7692	5392	9167	6077	7692	7754	4714	5367	5392	2705	9167	5367	4841	6781	7692	8451
			T		T												
6927	5536	2705	5392	4977	5392	6077	4841	2705	9418	4977	5663	6781	2705				

$3509 + 1883 = \square \rightarrow$ T	$1008 + 1697 = \square \rightarrow$ S	$3567 + 2096 = \square \rightarrow$ R
$3430 + 2647 = \square \rightarrow$ I	$2122 + 2855 = \square \rightarrow$ A	$3739 + 4712 = \square \rightarrow$ D
$4228 + 4939 = \square \rightarrow$ H	$5240 + 2514 = \square \rightarrow$ F	$2156 + 3211 = \square \rightarrow$ O
$6355 + 3063 = \square \rightarrow$ P	$2405 + 3131 = \square \rightarrow$ Y	$4680 + 2247 = \square \rightarrow$ B
$2458 + 2383 = \square \rightarrow$ C	$3167 + 1547 = \square \rightarrow$ G	$3586 + 3195 = \square \rightarrow$ K
$4305 + 3387 = \square \rightarrow$ E		

Scratch space:

CLUE 4 Subtraction

The fuel tank has a tiny leak. We must subtract the leaked fuel from our starting tank level to see how much energy is left.

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

A									A			
4944	5900	3287	6860	6252	3711	7435	4331	3287	4944	1163	6252	5419

											A						
3287	5419	8929	3698	5419	3881	7435	6860	4331	1163	4462	4944	4080	3698	5419	8929	7435	

5900	5419	3711	6860	1163	6129

$5684 - 740 = \square \rightarrow \text{A}$	$7954 - 4243 = \square \rightarrow \text{H}$	$8177 - 4890 = \square \rightarrow \text{R}$
$13085 - 4156 = \square \rightarrow \text{F}$	$11018 - 4766 = \square \rightarrow \text{G}$	$7894 - 3563 = \square \rightarrow \text{O}$
$8515 - 3096 = \square \rightarrow \text{E}$	$9232 - 2372 = \square \rightarrow \text{I}$	$11050 - 3615 = \square \rightarrow \text{T}$
$7980 - 3518 = \square \rightarrow \text{W}$	$6830 - 2949 = \square \rightarrow \text{C}$	$5674 - 1976 = \square \rightarrow \text{L}$
$6510 - 381 = \square \rightarrow \text{D}$	$6467 - 567 = \square \rightarrow \text{B}$	$5523 - 1443 = \square \rightarrow \text{S}$
$5111 - 3948 = \square \rightarrow \text{N}$		

Scratch space:

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

We found a box of backup power cells. If we divide them equally among our robotic scouts, we can see how many each robot gets.

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:

$72 \div 6 = \boxed{}$

$20 \div 4 = \boxed{}$

$4 \div 4 = \boxed{}$

$9 \div 3 = \boxed{}$

$36 \div 9 = \boxed{}$

$90 \div 9 = \boxed{}$

$35 \div 5 = \boxed{}$

$18 \div 2 = \boxed{}$

$24 \div 3 = \boxed{}$

$77 \div 7 = \boxed{}$

$18 \div 3 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain scrambles the navigation, then flies toward the red planet.
2. The villain steals the fuel cells, then zooms into a black hole.
3. The villain hacks the star gate, then flies toward the red planet.
4. The villain scrambles the navigation, then zooms into a black hole.
5. The villain disables the satellite, then skips through the cosmic wormhole.
6. The villain disables the satellite, then zooms into a black hole.
7. The villain loots the cargo bay, then escapes past the asteroid belt.
8. The villain loots the cargo bay, then zooms into a black hole.
9. The villain hacks the star gate, then skips through the cosmic wormhole.
10. The villain hacks the star gate, then zooms into a black hole.
11. The villain steals the fuel cells, then flies toward the red planet.
12. The villain hacks the star gate, then hides in the dark nebula.

Answer Key

The Galactic Nebula Heist

Culprit: Neil Armstrong

Gravity Boots · Force Field · Right-handed pilot · Bright Orange Visor · Static Sparks

Trail: Start 21 → Clue 1 19 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT USE THE ICE BEAM"

$4 \times 4 = 16$ (T) · $7 \times 9 = 63$ (H) · $5 \times 6 = 30$ (S) · $1 \times 1 = 1$ (D) · $10 \times 12 = 120$ (M) · $1 \times 11 = 11$ (I) · $11 \times 2 = 22$ (B) · $3 \times 7 = 21$ (C) · $10 \times 6 = 60$ (O) · $9 \times 9 = 81$ (N) · $8 \times 8 = 64$ (E) · $3 \times 8 = 24$ (A) · $11 \times 4 = 44$ (U)

Clue 2 (Rounding): "THE RIGHT HANDED STEERING WHEEL WAS COLD"

Round 9,289 to the nearest thousand = 9000 (T) · Round 434 to the nearest ten = 430 (C) · Round 288 to the nearest ten = 290 (N) · Round 1,126 to the nearest hundred = 1100 (E) · Round 213 to the nearest hundred = 200 (D) · Round 4,950 to the nearest thousand = 5000 (R) · Round 114 to the nearest ten = 110 (L) · Round 4,338 to the nearest hundred = 4300 (W) · Round 2,261 to the nearest hundred = 2300 (S) · Round 1,277 to the nearest hundred = 1300 (A) · Round 2,391 to the nearest thousand = 2000 (H) · Round 916 to the nearest hundred = 900 (G) · Round 30 to the nearest ten = 30 (O) · Round 3,653 to the nearest hundred = 3700 (I)

Clue 3 (Addition): "THE THIEF GOT SHOCKED BY STATIC SPARKS"

$3509 + 1883 = 5392$ (T) · $1008 + 1697 = 2705$ (S) · $3567 + 2096 = 5663$ (R) · $3430 + 2647 = 6077$ (I) · $2122 + 2855 = 4977$ (A) · $3739 + 4712 = 8451$ (D) · $4228 + 4939 = 9167$ (H) · $5240 + 2514 = 7754$ (F) · $2156 + 3211 = 5367$ (O) · $6355 + 3063 = 9418$ (P) · $2405 + 3131 = 5536$ (Y) · $4680 + 2247 = 6927$ (B) · $2458 + 2383 = 4841$ (C) · $3167 + 1547 = 4714$ (G) · $3586 + 3195 = 6781$ (K) · $4305 + 3387 = 7692$ (E)

Clue 4 (Subtraction): "A BRIGHT ORANGE REFLECTION WAS LEFT BEHIND"

$5684 - 740 = 4944$ (A) · $7954 - 4243 = 3711$ (H) · $8177 - 4890 = 3287$ (R) · $13085 - 4156 = 8929$ (F) · $11018 - 4766 = 6252$ (G) · $7894 - 3563 = 4331$ (O) · $8515 - 3096 = 5419$ (E) · $9232 - 2372 = 6860$ (I) · $11050 - 3615 = 7435$ (T) · $7980 - 3518 = 4462$ (W) · $6830 - 2949 = 3881$ (C) · $5674 - 1976 = 3698$ (L) · $6510 - 381 = 6129$ (D) · $6467 - 567 = 5900$ (B) · $5523 - 1443 = 4080$ (S) · $5111 - 3948 = 1163$ (N)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Neil Armstrong

$72 \div 6 = 12$ · $20 \div 4 = 5$ · $4 \div 4 = 1$ · $9 \div 3 = 3$ · $36 \div 9 = 4$ · $90 \div 9 = 10$ · $35 \div 5 = 7$ · $18 \div 2 = 9$ · $24 \div 3 = 8$ · $77 \div 7 = 11$ · $18 \div 3 = 6$