



The Cosmic Block Caper

Grade 4 math · Rounding, Multi-step word problems, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ Date: _____

A sneaky Space Bandit sneaked into Lunar Craft Outpost and swiped the main star core! Use your math skills to decode clues, eliminate innocent crew members, and catch the villain before they escape 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 Bandit is _____

Possible suspects

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

NAME	PRIMARY TOOL	SECONDARY ITEM	DOMINANT HAND	SUIT GEAR	COUNTER ITEM
Mae Jemison	PICKAXE BLASTER	MAGMA DRILL	LEFT HANDED	SILVER SPACESUIT	REDSTONE TORCH
Scott Kelly	GRAVITY BOOTS	MAGMA DRILL	RIGHT HANDED	SILVER SPACESUIT	WATER BUCKET
Peggy Whitson	PICKAXE BLASTER	MAGMA DRILL	LEFT HANDED	NEON GREEN HELMET	SLIME BLOCK
Valentina Tereshkova	PLASMA CHISEL	MAGMA DRILL	RIGHT HANDED	GOLDEN VISOR	SLIME BLOCK
Helen Sharman	PLASMA CHISEL	GLOWSTONE BEACON	LEFT HANDED	NEON GREEN HELMET	REDSTONE TORCH
Eileen Collins	JETPACK HARNESS	OBSIDIAN SHIELD	RIGHT HANDED	GOLDEN VISOR	SLIME BLOCK
Neil Moon	PICKAXE BLASTER	ENDER PEARL	RIGHT HANDED	NEON GREEN HELMET	REDSTONE TORCH
Victor Glover	PICKAXE BLASTER	NETHERITE HELMET	RIGHT HANDED	SILVER SPACESUIT	REDSTONE TORCH
Steve Miner	JETPACK HARNESS	MAGMA DRILL	RIGHT HANDED	GOLDEN VISOR	WATER BUCKET
Alex Craft	PICKAXE BLASTER	NETHERITE HELMET	RIGHT HANDED	NEON GREEN HELMET	SLIME BLOCK
Sally Ride	REDSTONE LASER	ENDER PEARL	RIGHT HANDED	SILVER SPACESUIT	REDSTONE TORCH
Alan Shepard	PLASMA CHISEL	OBSIDIAN SHIELD	RIGHT HANDED	SILVER SPACESUIT	REDSTONE TORCH
Leland Melvin	JETPACK HARNESS	MAGMA DRILL	LEFT HANDED	SILVER SPACESUIT	SLIME BLOCK
Bernard Harris	REDSTONE LASER	GLOWSTONE BEACON	RIGHT HANDED	GOLDEN VISOR	WATER BUCKET
Sunita Williams	REDSTONE LASER	MAGMA DRILL	RIGHT HANDED	NEON GREEN HELMET	REDSTONE TORCH
Michael Collins	GRAVITY BOOTS	OBSIDIAN SHIELD	RIGHT HANDED	GOLDEN VISOR	REDSTONE TORCH
Jessica Meir	PLASMA CHISEL	GLOWSTONE BEACON	RIGHT HANDED	GOLDEN VISOR	SLIME BLOCK
Yuri Orbit	PICKAXE BLASTER	ENDER PEARL	RIGHT HANDED	SILVER SPACESUIT	REDSTONE TORCH
Guion Bluford	PICKAXE BLASTER	ENDER PEARL	LEFT HANDED	NEON GREEN HELMET	WATER BUCKET
John Glenn	GRAVITY BOOTS	NETHERITE HELMET	RIGHT HANDED	GOLDEN VISOR	WATER BUCKET
Kalpana Chawla	REDSTONE LASER	MAGMA DRILL	RIGHT HANDED	SILVER SPACESUIT	REDSTONE TORCH

CLUE 1
Rounding

Our station computer logged cargo totals across three space bays to narrow down the suspect list.

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

T																T	
700	2000	170	50	90	110	110	20	90	1100	130	300	170	1700	1100	300	700	
2000	20	50	170	300	70	1700	90	130	90	20	1100	1700	2000	90	170	110	130

Round 694 to the nearest hundred → **T**

Round 1,685 to the nearest hundred → **S**

Round 166 to the nearest ten → **E**

Round 2,093 to the nearest thousand → **H**

Round 47 to the nearest ten → **V**

Round 1,144 to the nearest hundred → **N**

Round 111 to the nearest ten → **L**

Round 23 to the nearest ten → **A**

Round 67 to the nearest ten → **B**

Round 88 to the nearest ten → **I**

Round 127 to the nearest ten → **D**

Round 280 to the nearest hundred → **O**

Scratch space:

CLUE 2

Multi-step word problems

The long-range radar display only shows rounded asteroid masses to save screen memory.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

R									D	E	D
35	27	49	78	37	78	66	15				

There were 100 space crystals in all. 2 Moon Miners used 15 space crystals each. The other 2 Moon Miners shared the rest equally. How many space crystals did each of the other Moon Miners get?

Answer: → **R**

Astronaut earned 2 redstone dust in each of 2 rounds, plus 24 bonus redstone dust. Then 13 redstone dust were lost. How many redstone dust are left?

Answer: → **N**

Astronaut collected 26 redstone dust in the morning and 106 redstone dust in the afternoon, then split them equally among 2 Moon Miners. How many redstone dust did each get?

Answer: → **A**

There were 101 iron ingots in all. 3 Moon Miners used 9 iron ingots each. The other 2 Moon Miners shared the rest equally. How many iron ingots did each of the other Moon Miners get?

Answer: → **T**

Astronaut earned 7 iron ingots in each of 3 rounds, plus 12 bonus iron ingots. Then 6 iron ingots were lost. How many iron ingots are left?

Answer: → **I**

Astronaut filled 7 boxes with 6 energy cells each, then found 36 more energy cells. How many energy cells are there in all?

Answer: → **H**

There were 311 moon rocks in all. 17 moon rocks were set aside. The rest were shared equally among 6 Moon Miners. How many moon rocks did each get?

Answer: → **G**

Scratch space:

CLUE 3 Addition

We added up the oxygen canister supplies from both lower decks to reveal the third clue.

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

A															
5877	8844	7549	4973	7325	6179	3987	7041	4680	3987	7041	6419	6179	9559	3005	3987

							A										
6179	9559	4680	5399	7325	6419	5399	5877	4680	3987	7041	6179	7325	3987	9897	9559	6708	6708

$3532 + 2345 = \square \rightarrow \mathbf{A}$

$1430 + 3250 = \square \rightarrow \mathbf{R}$

$2021 + 984 = \square \rightarrow \mathbf{N}$

$1945 + 3028 = \square \rightarrow \mathbf{G}$

$2083 + 3316 = \square \rightarrow \mathbf{C}$

$2047 + 4372 = \square \rightarrow \mathbf{S}$

$4986 + 2563 = \square \rightarrow \mathbf{I}$

$3447 + 3878 = \square \rightarrow \mathbf{H}$

$5377 + 4520 = \square \rightarrow \mathbf{M}$

$2267 + 1720 = \square \rightarrow \mathbf{E}$

$3615 + 2564 = \square \rightarrow \mathbf{T}$

$6318 + 3241 = \square \rightarrow \mathbf{O}$

$4017 + 4827 = \square \rightarrow \mathbf{L}$

$4004 + 2704 = \square \rightarrow \mathbf{F}$

$4664 + 2377 = \square \rightarrow \mathbf{D}$

Scratch space:

CLUE 4

Subtraction

We measured the drop in energy reserve levels before and after the power breach.

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

S						S					S			
6643	5668	3828	5663	8819	4391	6643	2284	1986	4156	8819	6643	4790	5668	1830

						S								
1830	5310	4391	8819	1986	7418	6643	5707	8819	4391	8819	2158	3736	1830	5310

3828	1986	1830	4156	5310

$9761 - 3118 = \square \rightarrow \boxed{\text{S}}$

$5523 - 1367 = \square \rightarrow \boxed{\text{C}}$

$4507 - 679 = \square \rightarrow \boxed{\text{L}}$

$8648 - 3858 = \square \rightarrow \boxed{\text{U}}$

$5868 - 4038 = \square \rightarrow \boxed{\text{T}}$

$3789 - 1505 = \square \rightarrow \boxed{\text{P}}$

$7213 - 1550 = \square \rightarrow \boxed{\text{V}}$

$8820 - 1402 = \square \rightarrow \boxed{\text{D}}$

$8054 - 2386 = \square \rightarrow \boxed{\text{I}}$

$4806 - 1070 = \square \rightarrow \boxed{\text{N}}$

$7143 - 2752 = \square \rightarrow \boxed{\text{R}}$

$3281 - 1295 = \square \rightarrow \boxed{\text{A}}$

$8357 - 2650 = \square \rightarrow \boxed{\text{W}}$

$12983 - 4164 = \square \rightarrow \boxed{\text{E}}$

$5192 - 3034 = \square \rightarrow \boxed{\text{O}}$

$6569 - 1259 = \square \rightarrow \boxed{\text{H}}$

Scratch space:

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

We divided the remaining battery cells equally among five escape pods to decode the final 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:

$10 \div 5 = \boxed{}$

$12 \div 3 = \boxed{}$

$108 \div 12 = \boxed{}$

$5 \div 5 = \boxed{}$

$15 \div 5 = \boxed{}$

$50 \div 5 = \boxed{}$

$40 \div 5 = \boxed{}$

$6 \div 1 = \boxed{}$

$60 \div 5 = \boxed{}$

$77 \div 7 = \boxed{}$

$21 \div 3 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain carved a hole in the obsidian wall, then lit up the corridor with a beacon.
2. The villain sliced through heavy cables, then teleported away with a pearl.
3. The villain carved a hole in the obsidian wall, then deflected lasers with a shield.
4. The villain blasted through the blast doors, then teleported away with a pearl.
5. The villain sliced through heavy cables, then drilled through the floor.
6. The villain carved a hole in the obsidian wall, then donned a heavy protective helmet.
7. The villain blasted through the blast doors, then drilled through the floor.
8. The villain sliced through heavy cables, then lit up the corridor with a beacon.
9. The villain blasted through the blast doors, then donned a heavy protective helmet.
10. The villain hopped across low gravity bays, then donned a heavy protective helmet.
11. The villain hopped across low gravity bays, then drilled through the floor.
12. The villain sliced through heavy cables, then donned a heavy protective helmet.

Answer Key

The Cosmic Block Caper

Culprit: Kalpana Chawla

REDSTONE LASER · MAGMA DRILL · RIGHT HANDED · SILVER SPACESUIT · REDSTONE TORCH

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT HAVE OBSIDIAN SHIELD"

Round 694 to the nearest hundred = 700 (T) · Round 1,685 to the nearest hundred = 1700 (S) · Round 166 to the nearest ten = 170 (E) · Round 2,093 to the nearest thousand = 2000 (H) · Round 47 to the nearest ten = 50 (V) · Round 1,144 to the nearest hundred = 1100 (N) · Round 111 to the nearest ten = 110 (L) · Round 23 to the nearest ten = 20 (A) · Round 67 to the nearest ten = 70 (B) · Round 88 to the nearest ten = 90 (I) · Round 127 to the nearest ten = 130 (D) · Round 280 to the nearest hundred = 300 (O)

Clue 2 (Multi-step word problems): "RIGHT HANDED"

There were 100 space crystals in all. 2 Moon Miners used 15 space crystals each. The other 2 Moon Miners shared the rest equally. How many space crystals did each of the other Moon Miners get? = 35 (R) · Astronaut earned 2 redstone dust in each of 2 rounds, plus 24 bonus redstone dust. Then 13 redstone dust were lost. How many redstone dust are left? = 15 (N) · Astronaut collected 26 redstone dust in the morning and 106 redstone dust in the afternoon, then split them equally among 2 Moon Miners. How many redstone dust did each get? = 66 (A) · There were 101 iron ingots in all. 3 Moon Miners used 9 iron ingots each. The other 2 Moon Miners shared the rest equally. How many iron ingots did each of the other Moon Miners get? = 37 (T) · Astronaut earned 7 iron ingots in each of 3 rounds, plus 12 bonus iron ingots. Then 6 iron ingots were lost. How many iron ingots are left? = 27 (I) · Astronaut filled 7 boxes with 6 energy cells each, then found 36 more energy cells. How many energy cells are there in all? = 78 (H) · There were 311 moon rocks in all. 17 moon rocks were set aside. The rest were shared equally among 6 Moon Miners. How many moon rocks did each get? = 49 (G)

Clue 3 (Addition): "A LIGHTED REDSTONE TORCH SCARED THEM OFF"

$3532 + 2345 = 5877$ (A) · $1430 + 3250 = 4680$ (R) · $2021 + 984 = 3005$ (N) · $1945 + 3028 = 4973$ (G) · $2083 + 3316 = 5399$ (C) · $2047 + 4372 = 6419$ (S) · $4986 + 2563 = 7549$ (I) · $3447 + 3878 = 7325$ (H) · $5377 + 4520 = 9897$ (M) · $2267 + 1720 = 3987$ (E) · $3615 + 2564 = 6179$ (T) · $6318 + 3241 = 9559$ (O) · $4017 + 4827 = 8844$ (L) · $4004 + 2704 = 6708$ (F) · $4664 + 2377 = 7041$ (D)

Clue 4 (Subtraction): "SILVER SPACESUIT THREADS WERE ON THE LATCH"

$9761 - 3118 = 6643$ (S) · $5523 - 1367 = 4156$ (C) · $4507 - 679 = 3828$ (L) · $8648 - 3858 = 4790$ (U) · $5868 - 4038 = 1830$ (T) · $3789 - 1505 = 2284$ (P) · $7213 - 1550 = 5663$ (V) · $8820 - 1402 = 7418$ (D) · $8054 - 2386 = 5668$ (I) · $4806 - 1070 = 3736$ (N) · $7143 - 2752 = 4391$ (R) · $3281 - 1295 = 1986$ (A) · $8357 - 2650 = 5707$ (W) · $12983 - 4164 = 8819$ (E) · $5192 - 3034 = 2158$ (O) · $6569 - 1259 = 5310$ (H)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Kalpana Chawla

$10 \div 5 = 2$ · $12 \div 3 = 4$ · $108 \div 12 = 9$ · $5 \div 5 = 1$ · $15 \div 5 = 3$ · $50 \div 5 = 10$ · $40 \div 5 = 8$ · $6 \div 1 = 6$ · $60 \div 5 = 12$ · $77 \div 7 = 11$ · $21 \div 3 = 7$