



The Great Moon Dust Mystery

Grade 2 math · Addition, Subtraction, Place value, Skip counting, Missing addends · Reading level grades 1-2

Detective: _____ **Date:** _____

Someone sneaked into the space lab and took the glowing Moon Dust! The Astro-Dome needs your help. Use your math skills and look at the clues to find the sneaky space bandit.

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	SPACE POWER	SPECIAL TRICK	HAND PRINT	HAIR COLOR	WEAKNESS
Neil Strong	cosmic glide	asteroid smash	right handed	glowing orange hair	bubble gum
Leo Orbit	cosmic glide	warp speed	left handed	neon green hair	bubble gum
Ziggy Mars	laser dash	meteor toss	right handed	bright blue hair	magnet boots
Sally Ride	cosmic glide	meteor toss	right handed	neon green hair	magnet boots
Comet Cody	cosmic glide	warp speed	left handed	glowing orange hair	loud whistles
Cosmo Clay	laser dash	plasma beam	left handed	bright blue hair	loud whistles
Astro Art	rocket blast	orbit spin	right handed	neon green hair	bubble gum
Nova Bright	star shield	orbit spin	right handed	bright blue hair	loud whistles
Orion Rex	star shield	plasma beam	right handed	neon green hair	bubble gum
Ray Radar	laser dash	warp speed	left handed	glowing orange hair	bubble gum
Major Max	star shield	orbit spin	left handed	bright blue hair	bubble gum
Luna Loop	cosmic glide	warp speed	left handed	bright blue hair	bubble gum
Commander Kip	laser dash	plasma beam	right handed	glowing orange hair	bubble gum
Cadet Coco	gravity jump	orbit spin	right handed	neon green hair	magnet boots
Pippa Planet	gravity jump	orbit spin	right handed	neon green hair	bubble gum
Buzz Aldrin	cosmic glide	orbit spin	left handed	glowing orange hair	loud whistles
Jax Nebula	cosmic glide	warp speed	right handed	neon green hair	magnet boots
Stella Sky	gravity jump	warp speed	left handed	glowing orange hair	loud whistles
Nova Ned	rocket blast	meteor toss	right handed	neon green hair	loud whistles
Penny Proton	gravity jump	warp speed	right handed	neon green hair	bubble gum
Zara Pluto	rocket blast	meteor toss	right handed	neon green hair	bubble gum

CLUE 1 Addition

We need to count the star maps. Count the maps on the top shelf and add the maps on the floor to find the code.

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

T									T							T				
41	47	63	82	94	67	33	36	41	66	94	67	67	28	41	41	28	29	29		

		T					
26	63	41	63	28	51	29	

$17 + 24 = \square \rightarrow$ T	$23 + 13 = \square \rightarrow$ I	$17 + 12 = \square \rightarrow$ S
$21 + 30 = \square \rightarrow$ R	$41 + 41 = \square \rightarrow$ B	$17 + 11 = \square \rightarrow$ O
$47 + 20 = \square \rightarrow$ N	$15 + 18 = \square \rightarrow$ D	$15 + 11 = \square \rightarrow$ M
$56 + 38 = \square \rightarrow$ A	$19 + 44 = \square \rightarrow$ E	$15 + 32 = \square \rightarrow$ H
$24 + 42 = \square \rightarrow$ C		

Scratch space:

CLUE 2

Subtraction

Look at the fuel tanks. We had ten tanks of rocket juice but some leaked out. Subtract the leaked tanks to get the key.

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

T																		
47	53	59	22	50	25	53	47	53	66	38	78	25	22	66	83	83	59	78

T										
47	53	59	78	26	26	22	14	38	26	83

$60 - 13 = \square \rightarrow \text{T}$

$73 - 23 = \square \rightarrow \text{I}$

$110 - 32 = \square \rightarrow \text{D}$

$57 - 19 = \square \rightarrow \text{N}$

$40 - 26 = \square \rightarrow \text{K}$

$65 - 6 = \square \rightarrow \text{E}$

$50 - 24 = \square \rightarrow \text{O}$

$85 - 32 = \square \rightarrow \text{H}$

$88 - 22 = \square \rightarrow \text{A}$

$35 - 13 = \square \rightarrow \text{R}$

$29 - 4 = \square \rightarrow \text{G}$

$113 - 30 = \square \rightarrow \text{B}$

Scratch space:

CLUE 3

Place value

The computer screen shows numbers. Look at the tens place and the ones place to unlock the next secret.

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

S															S				S
29	85	71	63	79	90	48	58	48	48	14	33	36	58	82	29	85	68	61	29

85	78	33	82

What number has 2 tens and 9 ones? → **S**

What number has 7 tens and 1 one? → **I**

What number has 4 tens and 8 ones? → **B**

What number has 6 tens and 1 one? → **P**

What number has 9 tens and 0 ones? → **Y**

What number has 6 tens and 8 ones? → **O**

What number has 1 ten and 4 ones? → **L**

What number has 7 tens and 9 ones? → **K**

What number has 3 tens and 6 ones? → **G**

What number has 8 tens and 5 ones? → **T**

What number has 6 tens and 3 ones? → **C**

What number has 5 tens and 8 ones? → **U**

What number has 8 tens and 2 ones? → **M**

What number has 7 tens and 8 ones? → **H**

What number has 3 tens and 3 ones? → **E**

Scratch space:

CLUE 4 Skip counting

The space boots left prints on the dusty path. Count the steps by twos to reach the hidden room.

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

W																
9	26	130	27	55	45	18	10	45	26	27	45	6	42	26	26	45

140	10	8	42

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **W**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **N**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **R**

Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 → **I**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **U**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **F**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **O**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 → **E**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, __, 20, 22 → **D**

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **G**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 → **H**

Scratch space:

CLUE 5**Missing addends - the last clue**

The robot needs eight batteries to turn on, but we only have five. How many more do we need to make eight?

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:

$9 + \underline{\quad} = 13$

$2 + \underline{\quad} = 10$

$8 + \underline{\quad} = 15$

$6 + \underline{\quad} = 17$

$8 + \underline{\quad} = 20$

$1 + \underline{\quad} = 2$

$1 + \underline{\quad} = 6$

$6 + \underline{\quad} = 12$

$2 + \underline{\quad} = 4$

$8 + \underline{\quad} = 17$

$8 + \underline{\quad} = 11$

Step 2 - cross out the sentence with each answer:

1. The villain holds up a glowing star shield, then smashes a floating asteroid.
2. The villain makes a fast laser dash, then shoots a bright plasma beam.
3. The villain makes a fast laser dash, then smashes a floating asteroid.
4. The villain fires a giant rocket blast, then does a wild spin in orbit.
5. The villain takes off in a smooth cosmic glide, then tosses a heavy space meteor.
6. The villain makes a fast laser dash, then tosses a heavy space meteor.
7. The villain holds up a glowing star shield, then shoots a bright plasma beam.
8. The villain uses a high gravity jump, then does a wild spin in orbit.
9. The villain takes off in a smooth cosmic glide, then does a wild spin in orbit.
10. The villain uses a high gravity jump, then warps away at super speed.
11. The villain holds up a glowing star shield, then warps away at super speed.
12. The villain takes off in a smooth cosmic glide, then warps away at super speed.

Answer Key

The Great Moon Dust Mystery

Culprit: Penny Proton

gravity jump · warp speed · right handed · neon green hair · bubble gum

Trail: Start 21 → Clue 1 17 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE BANDIT CANNOT TOSS METEORS"

$17 + 24 = 41$ (T) · $23 + 13 = 36$ (I) · $17 + 12 = 29$ (S) · $21 + 30 = 51$ (R) · $41 + 41 = 82$ (B) · $17 + 11 = 28$ (O) · $47 + 20 = 67$ (N) · $15 + 18 = 33$ (D) · $15 + 11 = 26$ (M) · $56 + 38 = 94$ (A) · $19 + 44 = 63$ (E) · $15 + 32 = 47$ (H) · $24 + 42 = 66$ (C)

Clue 2 (Subtraction): "THE RIGHT HAND GRABBED THE DOORKNOB"

$60 - 13 = 47$ (T) · $73 - 23 = 50$ (I) · $110 - 32 = 78$ (D) · $57 - 19 = 38$ (N) · $40 - 26 = 14$ (K) · $65 - 6 = 59$ (E) · $50 - 24 = 26$ (O) · $85 - 32 = 53$ (H) · $88 - 22 = 66$ (A) · $35 - 13 = 22$ (R) · $29 - 4 = 25$ (G) · $113 - 30 = 83$ (B)

Clue 3 (Place value): "STICKY BUBBLE GUM STOPS THEM"

What number has 2 tens and 9 ones? = 29 (S) · What number has 7 tens and 1 one? = 71 (I) · What number has 4 tens and 8 ones? = 48 (B) · What number has 6 tens and 1 one? = 61 (P) · What number has 9 tens and 0 ones? = 90 (Y) · What number has 6 tens and 8 ones? = 68 (O) · What number has 1 ten and 4 ones? = 14 (L) · What number has 7 tens and 9 ones? = 79 (K) · What number has 3 tens and 6 ones? = 36 (G) · What number has 8 tens and 5 ones? = 85 (T) · What number has 6 tens and 3 ones? = 63 (C) · What number has 5 tens and 8 ones? = 58 (U) · What number has 8 tens and 2 ones? = 82 (M) · What number has 7 tens and 8 ones? = 78 (H) · What number has 3 tens and 3 ones? = 33 (E)

Clue 4 (Skip counting): "WE FOUND A NEON GREEN HAIR"

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (W) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (F) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (O) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (E) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, __, 20, 22 = 18 (D) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 = 6 (G) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (H)

Clue 5 (Missing addends): surviving statement is box 10 → Penny Proton

$9 + \underline{\quad} = 13 = 4$ · $2 + \underline{\quad} = 10 = 8$ · $8 + \underline{\quad} = 15 = 7$ · $6 + \underline{\quad} = 17 = 11$ · $8 + \underline{\quad} = 20 = 12$ · $1 + \underline{\quad} = 2 = 1$ · $1 + \underline{\quad} = 6 = 5$ · $6 + \underline{\quad} = 12 = 6$ · $2 + \underline{\quad} = 4 = 2$ · $8 + \underline{\quad} = 17 = 9$ · $8 + \underline{\quad} = 11 = 3$