



The Moon Base Mystery

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

Detective: _____ Date: _____

A sneak stole the moon crystal from Lunar Base Alpha. Examine the clues and eliminate suspects to catch the 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	GADGET	SPACESUIT COLOR	GLOVE HAND	HELMET STRIPE	SPACE SNACK
John Glenn	Radar Dish	Neon Blue	Right Handed	Gold Stripe	Space Peanuts
Mae Jemison	Jet Boots	Solar Yellow	Right Handed	Gold Stripe	Tang Drink Mix
Alan Shepard	Laser Pen	Solar Yellow	Right Handed	Red Stripe	Freeze Dried Ice Cream
Kalpana Chawla	Laser Pen	Solar Yellow	Right Handed	Gold Stripe	Tang Drink Mix
Guion Bluford	Gravity Boots	Cosmic Purple	Right Handed	Red Stripe	Freeze Dried Ice Cream
Ed White	Radar Dish	Lime Green	Right Handed	Gold Stripe	Freeze Dried Ice Cream
Sunita Williams	Star Map	Lime Green	Left Handed	Red Stripe	Space Peanuts
Sally Ride	Laser Pen	Neon Blue	Left Handed	Silver Stripe	Space Peanuts
Christina Koch	Radar Dish	Bright Orange	Right Handed	Red Stripe	Freeze Dried Ice Cream
Carl Sagan	Star Map	Neon Blue	Left Handed	Gold Stripe	Freeze Dried Ice Cream
Jim Lovell	Gravity Boots	Bright Orange	Left Handed	Gold Stripe	Freeze Dried Ice Cream
Galileo Galilei	Laser Pen	Bright Orange	Right Handed	Red Stripe	Tang Drink Mix
Jessica Meir	Radar Dish	Lime Green	Left Handed	Silver Stripe	Freeze Dried Ice Cream
Valentina Tereshkova	Laser Pen	Lime Green	Right Handed	Red Stripe	Freeze Dried Ice Cream
Gene Cernan	Radar Dish	Cosmic Purple	Left Handed	Red Stripe	Freeze Dried Ice Cream
Peggy Whitson	Star Map	Neon Blue	Left Handed	Silver Stripe	Space Peanuts
Ellen Ochoa	Laser Pen	Bright Orange	Left Handed	Silver Stripe	Space Peanuts
Neil Armstrong	Gravity Boots	Solar Yellow	Left Handed	Red Stripe	Freeze Dried Ice Cream
Michael Collins	Gravity Boots	Cosmic Purple	Right Handed	Silver Stripe	Tang Drink Mix
Nicolaus Copernicus	Jet Boots	Lime Green	Left Handed	Silver Stripe	Space Peanuts
Buzz Aldrin	Gravity Boots	Lime Green	Right Handed	Red Stripe	Freeze Dried Ice Cream

Multiplication facts (1-12)

You count equal rows of star crates to unlock the first code.

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

56 120 110 66 27 99 28 30 56 28 11 110 20 99 11 56

45 110 27 36 20 11 72 27 36 88 110 72 72 11 45

$8 \times 7 = \boxed{} \rightarrow \boxed{\mathbf{T}}$

$9 \times 3 = \square \rightarrow \mathbf{A}$

$$8 \times 11 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$9 \times 11 = \boxed{} \rightarrow \boxed{\text{N}}$

$4 \times 7 = \boxed{} \rightarrow \boxed{\text{D}}$

$$11 \times 1 = \boxed{} \rightarrow \boxed{0}$$

$6 \times 11 = \boxed{} \rightarrow \boxed{\text{B}}$

$9 \times 5 = \square \rightarrow \boxed{\mathbf{W}}$

$10 \times 11 = \boxed{} \rightarrow \boxed{\text{E}}$

$6 \times 12 = \square \rightarrow \boxed{\text{L}}$

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

$10 \times 2 = \boxed{} \rightarrow \boxed{\text{S}}$

$12 \times 3 = \boxed{} \rightarrow \boxed{\text{R}}$

$10 \times 12 = \boxed{} \rightarrow \boxed{\text{H}}$

Scratch space:

CLUE 2
Place value

You read the tens and ones on the space station screen.

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

T								T					T	T			
36	35	15	88	12	75	12	36	30	57	12	36	36	15	54	96		
				T											T		
88	69	83	35	36	35	96	18	54	15	54	57	69	39	12	36		

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

What number has 3 tens and 9 ones? → **L**

What number has 8 tens and 3 ones? → **G**

What number has 5 tens and 7 ones? → **P**

What number has 7 tens and 5 ones? → **B**

What number has 8 tens and 8 ones? → **R**

What number has 3 tens and 0 ones? → **S**

What number has 6 tens and 9 ones? → **I**

What number has 1 ten and 2 ones? → **O**

What number has 9 tens and 6 ones? → **A**

What number has 3 tens and 5 ones? → **H**

What number has 1 ten and 8 ones? → **N**

What number has 1 ten and 5 ones? → **E**

What number has 5 tens and 4 ones? → **D**

Scratch space:

CLUE 3

Addition

You add up the moon rocks found on the bay floor.

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

D							D									D					D
88	70	56	77	77	39	88	60	70	39	39	46	39	88	70	57	39	88				
57	37	39	37	70	39	76	97	71	39	76	70	25	86								

$54 + 34 = \square \rightarrow \boxed{\text{D}}$

$28 + 48 = \square \rightarrow \boxed{\text{A}}$

$42 + 44 = \square \rightarrow \boxed{\text{Y}}$

$32 + 45 = \square \rightarrow \boxed{\text{P}}$

$23 + 47 = \square \rightarrow \boxed{\text{R}}$

$15 + 10 = \square \rightarrow \boxed{\text{B}}$

$25 + 14 = \square \rightarrow \boxed{\text{E}}$

$26 + 20 = \square \rightarrow \boxed{\text{Z}}$

$34 + 26 = \square \rightarrow \boxed{\text{F}}$

$50 + 21 = \square \rightarrow \boxed{\text{N}}$

$26 + 30 = \square \rightarrow \boxed{\text{O}}$

$31 + 26 = \square \rightarrow \boxed{\text{I}}$

$56 + 41 = \square \rightarrow \boxed{\text{M}}$

$16 + 21 = \square \rightarrow \boxed{\text{C}}$

Scratch space:

CLUE 4

Subtraction

You take away used oxygen tanks from the storage rack.

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

F																	
82	47	24	27	74	77	86	24	52	56	60	52	56	72	77	11	59	74

86	56	11	52	41	59

$121 - 39 = \square \rightarrow \boxed{\text{F}}$

$54 - 30 = \square \rightarrow \boxed{\text{U}}$

$115 - 38 = \square \rightarrow \boxed{\text{A}}$

$50 - 23 = \square \rightarrow \boxed{\text{N}}$

$69 - 17 = \square \rightarrow \boxed{\text{I}}$

$19 - 8 = \square \rightarrow \boxed{\text{R}}$

$98 - 38 = \square \rightarrow \boxed{\text{W}}$

$79 - 5 = \square \rightarrow \boxed{\text{D}}$

$60 - 19 = \square \rightarrow \boxed{\text{P}}$

$99 - 40 = \square \rightarrow \boxed{\text{E}}$

$85 - 13 = \square \rightarrow \boxed{\text{H}}$

$77 - 21 = \square \rightarrow \boxed{\text{T}}$

$114 - 28 = \square \rightarrow \boxed{\text{S}}$

$50 - 3 = \square \rightarrow \boxed{\text{O}}$

Scratch space:

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

You find the missing number on the rocket keypad.

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:

$6 + \underline{\quad} = 14$

$4 + \underline{\quad} = 9$

$3 + \underline{\quad} = 9$

$1 + \underline{\quad} = 12$

$5 + \underline{\quad} = 8$

$9 + \underline{\quad} = 16$

$1 + \underline{\quad} = 13$

$9 + \underline{\quad} = 18$

$6 + \underline{\quad} = 10$

$4 + \underline{\quad} = 14$

$8 + \underline{\quad} = 10$

Step 2 - cross out the sentence with each answer:

1. The villain scan the bay with a radar dish, then adjust a bright orange visor.
2. The villain zoom away using jet boots, then adjust a bright orange visor.
3. The villain chart a course with a star map, then seal a cosmic purple coat.
4. The villain scan the bay with a radar dish, then flash a solar yellow helmet.
5. The villain stomp the hatch in gravity boots, then seal a cosmic purple coat.
6. The villain zap the lock with a laser pen, then click a lime green suit.
7. The villain stomp the hatch in gravity boots, then flash a solar yellow helmet.
8. The villain stomp the hatch in gravity boots, then click a lime green suit.
9. The villain scan the bay with a radar dish, then click a lime green suit.
10. The villain zoom away using jet boots, then flash a solar yellow helmet.
11. The villain zap the lock with a laser pen, then adjust a bright orange visor.
12. The villain zoom away using jet boots, then zip up a neon blue suit.

Answer Key

The Moon Base Mystery

Culprit: Christina Koch

Radar Dish · Bright Orange · Right Handed · Red Stripe · Freeze Dried Ice Cream

Trail: Start 21 → Clue 1 17 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT WEAR SOLAR YELLOW"

$8 \times 7 = 56$ (T) · $9 \times 3 = 27$ (A) · $8 \times 11 = 88$ (Y) · $9 \times 11 = 99$ (N) · $4 \times 7 = 28$ (D) · $11 \times 1 = 11$ (O) · $6 \times 11 = 66$ (B) · $9 \times 5 = 45$ (W) · $10 \times 11 = 110$ (E) · $6 \times 12 = 72$ (L) · $6 \times 5 = 30$ (I) · $10 \times 2 = 20$ (S) · $12 \times 3 = 36$ (R) · $10 \times 12 = 120$ (H)

Clue 2 (Place value): "THE ROBOT SPOTTED A RIGHT HANDED PILOT"

What number has 3 tens and 6 ones? = 36 (T) · What number has 3 tens and 9 ones? = 39 (L) · What number has 8 tens and 3 ones? = 83 (G) · What number has 5 tens and 7 ones? = 57 (P) · What number has 7 tens and 5 ones? = 75 (B) · What number has 8 tens and 8 ones? = 88 (R) · What number has 3 tens and 0 ones? = 30 (S) · What number has 6 tens and 9 ones? = 69 (I) · What number has 1 ten and 2 ones? = 12 (O) · What number has 9 tens and 6 ones? = 96 (A) · What number has 3 tens and 5 ones? = 35 (H) · What number has 1 ten and 8 ones? = 18 (N) · What number has 1 ten and 5 ones? = 15 (E) · What number has 5 tens and 4 ones? = 54 (D)

Clue 3 (Addition): "DROPPED FREEZE DRIED ICE CREAM NEARBY"

$54 + 34 = 88$ (D) · $28 + 48 = 76$ (A) · $42 + 44 = 86$ (Y) · $32 + 45 = 77$ (P) · $23 + 47 = 70$ (R) · $15 + 10 = 25$ (B) · $25 + 14 = 39$ (E) · $26 + 20 = 46$ (Z) · $34 + 26 = 60$ (F) · $50 + 21 = 71$ (N) · $26 + 30 = 56$ (O) · $31 + 26 = 57$ (I) · $56 + 41 = 97$ (M) · $16 + 21 = 37$ (C)

Clue 4 (Subtraction): "FOUND A SUIT WITH A RED STRIPE"

$121 - 39 = 82$ (F) · $54 - 30 = 24$ (U) · $115 - 38 = 77$ (A) · $50 - 23 = 27$ (N) · $69 - 17 = 52$ (I) · $19 - 8 = 11$ (R) · $98 - 38 = 60$ (W) · $79 - 5 = 74$ (D) · $60 - 19 = 41$ (P) · $99 - 40 = 59$ (E) · $85 - 13 = 72$ (H) · $77 - 21 = 56$ (T) · $114 - 28 = 86$ (S) · $50 - 3 = 47$ (O)

Clue 5 (Missing addends): surviving statement is box 1 → Christina Koch

$6 + \underline{\quad} = 14 = 8$ · $4 + \underline{\quad} = 9 = 5$ · $3 + \underline{\quad} = 9 = 6$ · $1 + \underline{\quad} = 12 = 11$ · $5 + \underline{\quad} = 8 = 3$ · $9 + \underline{\quad} = 16 = 7$ · $1 + \underline{\quad} = 13 = 12$ · $9 + \underline{\quad} = 18 = 9$ · $6 + \underline{\quad} = 10 = 4$ · $4 + \underline{\quad} = 14 = 10$ · $8 + \underline{\quad} = 10 = 2$