



The Mystery of Mapmaker Bay

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

Detective: _____ Date: _____

The Golden Compass has vanished from the Treehouse Camp! The Chief Archivist needs your help to track down the sneaky explorer who took it before the island ferry departs.

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 the rogue explorer is _____

Possible suspects

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

NAME	PRIMARY GEAR	SECONDARY GEAR	DOMINANT HAND	HAIR STYLE	FOIL
Davy Crockett	Night Goggles	Mini Flashlight	Left Handed	Curly Red Hair	Loud Whistles
Sacagawea	Pocket Glider	Decoder Ring	Right Handed	Straight Blonde Hair	Loud Whistles
Mary Anning	Grappling Hook	Walkie Talkie	Left Handed	Straight Blonde Hair	Loud Whistles
Dian Fossey	Spy Drone	Smoke Bomb	Right Handed	Spiky Brown Hair	Sweet Treats
Amelia Earhart	Grappling Hook	Smoke Bomb	Left Handed	Curly Red Hair	Loud Whistles
Alexander Humboldt	Pocket Glider	Decoder Ring	Right Handed	Curly Red Hair	Sweet Treats
Jane Goodall	Grappling Hook	Decoder Ring	Right Handed	Straight Blonde Hair	Loud Whistles
Bessie Coleman	Laser Pointer	Smoke Bomb	Left Handed	Spiky Brown Hair	Loud Whistles
Daniel Boone	Night Goggles	Secret Ink	Right Handed	Straight Blonde Hair	Shiny Coins
Buzz Aldrin	Laser Pointer	Decoder Ring	Right Handed	Spiky Brown Hair	Loud Whistles
Nellie Bly	Grappling Hook	Decoder Ring	Right Handed	Spiky Brown Hair	Sweet Treats
Steve Irwin	Spy Drone	Walkie Talkie	Right Handed	Straight Blonde Hair	Loud Whistles
Matthew Henson	Laser Pointer	Smoke Bomb	Right Handed	Straight Blonde Hair	Loud Whistles
Laura Dekker	Spy Drone	Mini Flashlight	Left Handed	Straight Blonde Hair	Sweet Treats
Jeanne Baret	Spy Drone	Decoder Ring	Right Handed	Spiky Brown Hair	Sweet Treats
Sally Ride	Night Goggles	Smoke Bomb	Right Handed	Curly Red Hair	Loud Whistles
Roald Amundsen	Spy Drone	Walkie Talkie	Right Handed	Straight Blonde Hair	Shiny Coins
Mae Jemison	Grappling Hook	Mini Flashlight	Right Handed	Straight Blonde Hair	Loud Whistles
Ibn Battuta	Laser Pointer	Secret Ink	Left Handed	Spiky Brown Hair	Loud Whistles
Robert Peary	Laser Pointer	Decoder Ring	Left Handed	Straight Blonde Hair	Loud Whistles
Neil Armstrong	Spy Drone	Smoke Bomb	Right Handed	Straight Blonde Hair	Loud Whistles

Multiplication facts (1-12)

We found the gear room in a mess. There were several rows of shelves, with climbing ropes on each shelf. If we multiply them together, we get a clue about the thief's gear!

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

A number line from 0 to 100. The line is divided into 10 equal segments by 11 vertical tick marks. Below each tick mark is a box. The numbers 30, 99, and 15 are written below the first, second, and third boxes respectively. The number 30 is highlighted in orange. The numbers 81, 70, 21, 21, 5, 70, 108, 50, 80, 15, 7, 108, 80, and 30 are written below the fourth through fifteenth boxes respectively. The number 30 is highlighted in orange. The numbers 56, 7, and 15 are written below the sixteenth through eighteenth boxes respectively. The numbers 7, 66, 80, 77, and 15 are written below the nineteenth through twenty-third boxes respectively. The numbers 9, 80, 66, 9, and 7 are written below the twenty-fourth through twenty-eighth boxes respectively.

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

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

$7 \times 3 = \boxed{} \rightarrow \boxed{\text{L}}$

$5 \times 3 = \boxed{} \rightarrow \boxed{\text{E}}$

$$5 \times 10 = \boxed{} \rightarrow \boxed{\mathbf{D}}$$

$1 \times 9 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$7 \times 11 = \boxed{} \rightarrow \boxed{\text{K}}$$

$9 \times 9 = \square \rightarrow \boxed{\mathbf{V}}$

$$8 \times 10 = \boxed{} \rightarrow \boxed{0}$$

$$9 \times 12 = \boxed{} \rightarrow \boxed{\text{N}}$$

$6 \times 11 = \boxed{} \rightarrow \boxed{\mathbf{M}}$

$7 \times 10 = \boxed{} \rightarrow \boxed{\text{I}}$

$1 \times 7 = \boxed{} \rightarrow \boxed{\text{S}}$

$1 \times 5 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$$7 \times 8 = \boxed{} \rightarrow \boxed{\text{U}}$$

Scratch space:

CLUE 2

The ancient security screen is fuzzy. The dials only show numbers rounded to the nearest ten. Round the power level to unlock the clue on the screen.

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

370 2300 700 7000 1100 700 430 70 3700 170 230 7000 230 370 50 1300 5000 430 7000

1300 230 290 2300 370 2300 430 1100 500 700 500

Round 370 to the nearest ten $\rightarrow$ **T**

Round 2,324 to the nearest hundred → **H**

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

Round 507 to the nearest hundred → **D**

Round 168 to the nearest ten $\rightarrow$ **V**

Round 69 to the nearest ten $\rightarrow$ **K**

Round 3,704 to the nearest hundred $\rightarrow$ **Y**

Round 49 to the nearest ten $\rightarrow$ **0**

Round 7,321 to the nearest thousand $\rightarrow$ **S**

Round 1,346 to the nearest hundred $\rightarrow$ **R**

Round 431 to the nearest ten $\rightarrow$ **A**

Round 674 to the nearest hundred $\rightarrow$ **E**

Round 4,871 to the nearest thousand $\rightarrow$ **W**

Round 227 to the nearest ten $\rightarrow$ **I**

Round 1,118 to the nearest hundred → **N**

Scratch space:

CLUE 3

Addition

We need to combine the weight of the gold coins and the silver keys we found. Add the two piles together to find the secret safe combination!

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

T																	
6085	2279	4068	8708	7893	4068	7507	3285	9469	6983	7893	8708	7507	6111	7507	5044		
5163	9469	5054	4766	6627	5054	6983	6530	6111	2279	7398	8708	6085	6627	4068	8708		

$4048 + 2037 = \square \rightarrow \text{T}$

$3562 + 5146 = \square \rightarrow \text{S}$

$3665 + 2446 = \square \rightarrow \text{W}$

$3337 + 1707 = \square \rightarrow \text{Y}$

$1337 + 1948 = \square \rightarrow \text{K}$

$5031 + 2862 = \square \rightarrow \text{N}$

$2999 + 3984 = \square \rightarrow \text{U}$

$2994 + 4404 = \square \rightarrow \text{I}$

$1961 + 4569 = \square \rightarrow \text{D}$

$3536 + 1627 = \square \rightarrow \text{F}$

$1741 + 3313 = \square \rightarrow \text{O}$

$3335 + 3292 = \square \rightarrow \text{L}$

$5605 + 3864 = \square \rightarrow \text{R}$

$4183 + 3324 = \square \rightarrow \text{A}$

$1222 + 1057 = \square \rightarrow \text{H}$

$1642 + 2426 = \square \rightarrow \text{E}$

$3325 + 1441 = \square \rightarrow \text{M}$

Scratch space:

CLUE 4 Subtraction

The thief drained the energy pack of our flashlight. Subtract the remaining power from the total to see how long they were in the secret room.

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

W																	
5963	6979	1484	2068	6010	6344	7307	1422	8202	7323	8055	3850	2811	7852	8202			
3962	6782	2068	6344	7307	6979	7852	8055	3850	7323	2068	6344	8202	7852	6979	2550	8055	1332

$6302 - 339 = \square \rightarrow \mathbf{W}$	$11667 - 3815 = \square \rightarrow \mathbf{H}$	$11531 - 3329 = \square \rightarrow \mathbf{T}$
$1837 - 505 = \square \rightarrow \mathbf{P}$	$7463 - 156 = \square \rightarrow \mathbf{D}$	$9683 - 2704 = \square \rightarrow \mathbf{E}$
$4302 - 340 = \square \rightarrow \mathbf{B}$	$6547 - 2697 = \square \rightarrow \mathbf{I}$	$11409 - 4627 = \square \rightarrow \mathbf{L}$
$5103 - 2553 = \square \rightarrow \mathbf{M}$	$10545 - 4201 = \square \rightarrow \mathbf{N}$	$4207 - 1396 = \square \rightarrow \mathbf{G}$
$10314 - 4304 = \square \rightarrow \mathbf{U}$	$10041 - 1986 = \square \rightarrow \mathbf{A}$	$8128 - 805 = \square \rightarrow \mathbf{R}$
$3110 - 1688 = \square \rightarrow \mathbf{S}$	$4297 - 2229 = \square \rightarrow \mathbf{O}$	$6213 - 4729 = \square \rightarrow \mathbf{F}$

Scratch space:

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

We found a pile of ancient map pieces. If we divide them evenly among our team members, the leftover pieces will reveal 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:

$54 \div 6 = \boxed{}$

$10 \div 10 = \boxed{}$

$6 \div 2 = \boxed{}$

$121 \div 11 = \boxed{}$

$4 \div 1 = \boxed{}$

$18 \div 3 = \boxed{}$

$21 \div 3 = \boxed{}$

$40 \div 5 = \boxed{}$

$55 \div 11 = \boxed{}$

$24 \div 2 = \boxed{}$

$12 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swings across the river with a grappling hook, then examines the dusty lock with a mini flashlight.
2. The villain scouts the area with a spy drone, then writes a hidden clue using secret ink.
3. The villain scouts the area with a spy drone, then whispers to an accomplice over a walkie talkie.
4. The villain searches in the dark with night goggles, then cracks the ancient code with a decoder ring.
5. The villain searches in the dark with night goggles, then vanishes into the shadows with a smoke bomb.
6. The villain points out the path with a laser pointer, then whispers to an accomplice over a walkie talkie.
7. The villain points out the path with a laser pointer, then writes a hidden clue using secret ink.
8. The villain swings across the river with a grappling hook, then writes a hidden clue using secret ink.
9. The villain sails over the trees with a pocket glider, then cracks the ancient code with a decoder ring.
10. The villain swings across the river with a grappling hook, then cracks the ancient code with a decoder ring.
11. The villain points out the path with a laser pointer, then cracks the ancient code with a decoder ring.
12. The villain sails over the trees with a pocket glider, then writes a hidden clue using secret ink.

Answer Key

The Mystery of Mapmaker Bay

Culprit: Jane Goodall

Grappling Hook · Decoder Ring · Right Handed · Straight Blonde Hair · Loud Whistles

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE SMOKE BOMBS"

$5 \times 6 = 30$ (T) · $9 \times 11 = 99$ (H) · $7 \times 3 = 21$ (L) · $5 \times 3 = 15$ (E) · $5 \times 10 = 50$ (D) · $1 \times 9 = 9$ (B) · $7 \times 11 = 77$ (K) · $9 \times 9 = 81$ (V) · $8 \times 10 = 80$ (O) · $9 \times 12 = 108$ (N) · $6 \times 11 = 66$ (M) · $7 \times 10 = 70$ (I) · $1 \times 7 = 7$ (S) · $1 \times 5 = 5$ (A) · $7 \times 8 = 56$ (U)

Clue 2 (Rounding): "THE SNEAKY VISITOR WAS RIGHT HANDED"

Round 370 to the nearest ten = 370 (T) · Round 2,324 to the nearest hundred = 2300 (H) · Round 288 to the nearest ten = 290 (G) · Round 507 to the nearest hundred = 500 (D) · Round 168 to the nearest ten = 170 (V) · Round 69 to the nearest ten = 70 (K) · Round 3,704 to the nearest hundred = 3700 (Y) · Round 49 to the nearest ten = 50 (O) · Round 7,321 to the nearest thousand = 7000 (S) · Round 1,346 to the nearest hundred = 1300 (R) · Round 431 to the nearest ten = 430 (A) · Round 674 to the nearest hundred = 700 (E) · Round 4,871 to the nearest thousand = 5000 (W) · Round 227 to the nearest ten = 230 (I) · Round 1,118 to the nearest hundred = 1100 (N)

Clue 3 (Addition): "THE SNEAK RUNS AWAY FROM LOUD WHISTLES"

$4048 + 2037 = 6085$ (T) · $3562 + 5146 = 8708$ (S) · $3665 + 2446 = 6111$ (W) · $3337 + 1707 = 5044$ (Y) · $1337 + 1948 = 3285$ (K) · $5031 + 2862 = 7893$ (N) · $2999 + 3984 = 6983$ (U) · $2994 + 4404 = 7398$ (I) · $1961 + 4569 = 6530$ (D) · $3536 + 1627 = 5163$ (F) · $1741 + 3313 = 5054$ (O) · $3335 + 3292 = 6627$ (L) · $5605 + 3864 = 9469$ (R) · $4183 + 3324 = 7507$ (A) · $1222 + 1057 = 2279$ (H) · $1642 + 2426 = 4068$ (E) · $3325 + 1441 = 4766$ (M)

Clue 4 (Subtraction): "WE FOUND STRAIGHT BLONDE HAIR ON THE MAP"

$6302 - 339 = 5963$ (W) · $11667 - 3815 = 7852$ (H) · $11531 - 3329 = 8202$ (T) · $1837 - 505 = 1332$ (P) · $7463 - 156 = 7307$ (D) · $9683 - 2704 = 6979$ (E) · $4302 - 340 = 3962$ (B) · $6547 - 2697 = 3850$ (I) · $11409 - 4627 = 6782$ (L) · $5103 - 2553 = 2550$ (M) · $10545 - 4201 = 6344$ (N) · $4207 - 1396 = 2811$ (G) · $10314 - 4304 = 6010$ (U) · $10041 - 1986 = 8055$ (A) · $8128 - 805 = 7323$ (R) · $3110 - 1688 = 1422$ (S) · $4297 - 2229 = 2068$ (O) · $6213 - 4729 = 1484$ (F)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Jane Goodall

$54 \div 6 = 9$ · $10 \div 10 = 1$ · $6 \div 2 = 3$ · $121 \div 11 = 11$ · $4 \div 1 = 4$ · $18 \div 3 = 6$ · $21 \div 3 = 7$ · $40 \div 5 = 8$ · $55 \div 11 = 5$ · $24 \div 2 = 12$ · $12 \div 6 = 2$