



The Mystery of Sunken Island

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

Detective: _____ **Date:** _____

A mysterious rogue explorer broke into the island museum and snatched the golden sun medallion! Track down the clues across the cove to figure out who took it.

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 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 TOOL	SPECIAL GEAR	DOMINANT HAND	HAIR COLOR	SENSED WEAKNESS
Jim Hawkins	Bronze Telescope	Smoke Bomb	Right Handed	Blonde Hair	Loud Whistle
Ibn Battuta	Signal Lantern	Rope Ladder	Left Handed	Blonde Hair	Squeaky Boots
David Livingstone	Pocket Map	Pocket Watch	Right Handed	Blonde Hair	Squeaky Boots
Edmund Hillary	Brass Compass	Smoke Bomb	Right Handed	Red Hair	Squeaky Boots
Mary Read	Grappling Hook	Map Case	Left Handed	Blonde Hair	Squeaky Boots
Marco Polo	Pocket Map	Smoke Bomb	Left Handed	Blonde Hair	Squeaky Boots
Ching Shih	Signal Lantern	Pocket Watch	Right Handed	Red Hair	Bright Light
Roald Amundsen	Pocket Map	Pocket Watch	Left Handed	Red Hair	Bright Light
Amelia Earhart	Bronze Telescope	Pocket Watch	Left Handed	Blonde Hair	Squeaky Boots
Anne Bonny	Grappling Hook	Rope Ladder	Left Handed	Blonde Hair	Bright Light
Grace O Malley	Grappling Hook	Rope Ladder	Right Handed	Black Hair	Bright Light
Lara Croft	Bronze Telescope	Map Case	Left Handed	Blonde Hair	Squeaky Boots
Captain Blackbeard	Brass Compass	Smoke Bomb	Right Handed	Blonde Hair	Squeaky Boots
Sir Francis Drake	Grappling Hook	Map Case	Right Handed	Blonde Hair	Squeaky Boots
Hernan Cortes	Pocket Map	Pocket Watch	Left Handed	Blonde Hair	Loud Whistle
Jack Sparrow	Bronze Telescope	Golden Key	Left Handed	Blonde Hair	Bright Light
Jacques Cousteau	Signal Lantern	Pocket Watch	Left Handed	Red Hair	Loud Whistle
Indiana Jones	Bronze Telescope	Map Case	Right Handed	Blonde Hair	Squeaky Boots
Ernest Shackleton	Pocket Map	Smoke Bomb	Left Handed	Red Hair	Squeaky Boots
Matthew Henson	Signal Lantern	Map Case	Left Handed	Blonde Hair	Bright Light
James Cook	Grappling Hook	Map Case	Left Handed	Blonde Hair	Bright Light

CLUE 1 Addition

You find a torn page from the logbook. Adding up the daily coin counts reveals a secret clue.

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

T									T								T
9517	7468	7685	3206	3920	3206	3366	7685	2918	9517	5326	5406	7685	3206	5980	5406	9517	

2918	5055	3430	3430	7929	5055	3430	5406	3366	7685	4895	5055	5326	5326	7685	3430

$2883 + 6634 = \boxed{} \rightarrow \boxed{\text{T}}$

$4700 + 3229 = \boxed{} \rightarrow \boxed{\text{Y}}$

$2106 + 1100 = \boxed{} \rightarrow \boxed{\text{S}}$

$3327 + 1999 = \boxed{} \rightarrow \boxed{\text{D}}$

$2616 + 1304 = \boxed{} \rightarrow \boxed{\text{U}}$

$2200 + 1166 = \boxed{} \rightarrow \boxed{\text{P}}$

$3731 + 3737 = \boxed{} \rightarrow \boxed{\text{H}}$

$2645 + 2250 = \boxed{} \rightarrow \boxed{\text{L}}$

$3026 + 2380 = \boxed{} \rightarrow \boxed{\text{O}}$

$1054 + 1864 = \boxed{} \rightarrow \boxed{\text{C}}$

$4453 + 3232 = \boxed{} \rightarrow \boxed{\text{E}}$

$1906 + 4074 = \boxed{} \rightarrow \boxed{\text{N}}$

$2268 + 1162 = \boxed{} \rightarrow \boxed{\text{R}}$

$2085 + 2970 = \boxed{} \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 2 Rounding

The ship sonar display rounds all distance numbers to the nearest ten. Rounding the scanner reading gives you the next clue.

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

W									W					
290	170	700	110	20	90	90	90	900	290	900	30	20	1100	700
5000	900	110	1700	20	1700	3000	170	30	30	900	170	110		

Round 288 to the nearest ten → **W**

Round 5,011 to the nearest thousand → **H**

Round 1,132 to the nearest hundred → **F**

Round 864 to the nearest hundred → **A**

Round 1,710 to the nearest hundred → **D**

Round 166 to the nearest ten → **I**

Round 30 to the nearest ten → **L**

Round 114 to the nearest ten → **N**

Round 22 to the nearest ten → **E**

Round 3,223 to the nearest thousand → **V**

Round 89 to the nearest ten → **S**

Round 697 to the nearest hundred → **T**

Scratch space:

Subtraction

You compare the weight of the empty crate to the full one. Finding the difference uncovers another detail.

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

Diagram illustrating the insertion of 6209 into a B-tree. The tree structure shows 10 slots. The first slot contains 'T' and the value 6209. The second slot is empty with value 5261. The third slot is empty with value 1377. The fourth slot is empty with value 6482. The fifth slot is empty with value 5083. The sixth slot is empty with value 5911. The seventh slot is empty with value 8852. The eighth slot is empty with value 2713. The ninth slot is empty with value 5261. The tenth slot is empty with value 1377. The eleventh slot is empty with value 5911. The twelfth slot is empty with value 8852. The thirteenth slot is empty with value 2713. The fourteenth slot is empty with value 4929. The fifteenth slot is empty with value 8212. The sixteenth slot is empty with value 5083. The seventeenth slot is empty with value 1377. The eighteenth slot is empty with value 5911. The nineteenth slot is empty with value 5406. The twentieth slot is empty with value 3641. Below the tree, the values 6742, 5054, 5054, 6209, and 4929 are listed. The value 6209 is highlighted in orange.

$9718 - 3509 = \boxed{} \rightarrow \mathbf{T}$

$$5561 - 155 = \boxed{} \rightarrow \boxed{\text{K}}$$

$10603 - 3861 = \boxed{} \rightarrow \boxed{\text{B}}$

$$9299 - 1087 = \boxed{} \rightarrow \boxed{\text{Q}}$$

$5182 - 2469 = \boxed{} \rightarrow \boxed{\text{D}}$

$8778 - 2296 = \boxed{} \rightarrow \boxed{\text{G}}$

$11859 - 3007 = \boxed{} \rightarrow \boxed{\text{R}}$

$1559 - 182 = \boxed{} \rightarrow \boxed{\text{E}}$

$$6282 - 1199 = \boxed{} \rightarrow \boxed{\text{U}}$$

$8347 - 4706 = \boxed{} \rightarrow \boxed{\text{Y}}$

$$5385 - 456 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$6882 - 1828 = \boxed{} \rightarrow \boxed{0}$$

$$6831 - 1570 = \boxed{} \rightarrow \boxed{\text{H}}$$

9825 - 3914 = → **A**

Scratch space:

CLUE 4

Multiplication facts (1-12)

The supply room holds identical stacks of wooden crates. Multiplying the rows gives you the code.

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

A								A						A		
14	11	72	12	77	88	2	84	14	36	96	20	54	96	14	77	88

	A											
132	14	20	12	77	54	84	2	72	12	35	63	

$2 \times 7 = \square \rightarrow \boxed{\text{A}}$

$11 \times 8 = \square \rightarrow \boxed{\text{D}}$

$2 \times 1 = \square \rightarrow \boxed{\text{E}}$

$12 \times 7 = \square \rightarrow \boxed{\text{H}}$

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

$7 \times 5 = \square \rightarrow \boxed{\text{C}}$

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

$11 \times 12 = \square \rightarrow \boxed{\text{W}}$

$9 \times 6 = \square \rightarrow \boxed{\text{T}}$

$11 \times 7 = \square \rightarrow \boxed{\text{N}}$

$6 \times 2 = \square \rightarrow \boxed{\text{O}}$

$8 \times 12 = \square \rightarrow \boxed{\text{R}}$

$11 \times 1 = \square \rightarrow \boxed{\text{B}}$

$7 \times 9 = \square \rightarrow \boxed{\text{K}}$

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

Scratch space:

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

The captain divides the remaining map pieces equally among the scouts to unlock the final message.

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:

$6 \div 2 = \boxed{}$

$50 \div 10 = \boxed{}$

$144 \div 12 = \boxed{}$

$24 \div 12 = \boxed{}$

$12 \div 3 = \boxed{}$

$11 \div 1 = \boxed{}$

$3 \div 3 = \boxed{}$

$45 \div 5 = \boxed{}$

$84 \div 12 = \boxed{}$

$90 \div 9 = \boxed{}$

$12 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain lit up the dark hallway with a signal lantern, then unlocked the heavy chest with a golden key.
2. The villain checked the direction on a brass compass, then unlocked the heavy chest with a golden key.
3. The villain scouted ahead with a bronze telescope, then checked the remaining time on a pocket watch.
4. The villain checked the direction on a brass compass, then checked the remaining time on a pocket watch.
5. The villain swung across the gap with a grappling hook, then snatched the ancient paper from the map case.
6. The villain scouted ahead with a bronze telescope, then unlocked the heavy chest with a golden key.
7. The villain swung across the gap with a grappling hook, then climbed down the cliff with a rope ladder.
8. The villain scouted ahead with a bronze telescope, then snatched the ancient paper from the map case.
9. The villain scouted ahead with a bronze telescope, then climbed down the cliff with a rope ladder.
10. The villain studied the secret routes on a pocket map, then snatched the ancient paper from the map case.
11. The villain checked the direction on a brass compass, then snatched the ancient paper from the map case.
12. The villain studied the secret routes on a pocket map, then vanished behind a thick smoke bomb.

Answer Key

The Mystery of Sunken Island

Culprit: Lara Croft

Bronze Telescope · Map Case · Left Handed · Blonde Hair · Squeaky Boots

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SUSPECT DOES NOT CARRY A ROPE LADDER"

$2883 + 6634 = 9517$ (T) · $4700 + 3229 = 7929$ (Y) · $2106 + 1100 = 3206$ (S) · $3327 + 1999 = 5326$ (D) · $2616 + 1304 = 3920$ (U) · $2200 + 1166 = 3366$ (P) · $3731 + 3737 = 7468$ (H) · $2645 + 2250 = 4895$ (L) · $3026 + 2380 = 5406$ (O) · $1054 + 1864 = 2918$ (C) · $4453 + 3232 = 7685$ (E) · $1906 + 4074 = 5980$ (N) · $2268 + 1162 = 3430$ (R) · $2085 + 2970 = 5055$ (A)

Clue 2 (Rounding): "WITNESS SAW A LEFT HANDED VILLAIN"

Round 288 to the nearest ten = 290 (W) · Round 5,011 to the nearest thousand = 5000 (H) · Round 1,132 to the nearest hundred = 1100 (F) · Round 864 to the nearest hundred = 900 (A) · Round 1,710 to the nearest hundred = 1700 (D) · Round 166 to the nearest ten = 170 (I) · Round 30 to the nearest ten = 30 (L) · Round 114 to the nearest ten = 110 (N) · Round 22 to the nearest ten = 20 (E) · Round 3,223 to the nearest thousand = 3000 (V) · Round 89 to the nearest ten = 90 (S) · Round 697 to the nearest hundred = 700 (T)

Clue 3 (Subtraction): "THE GUARD HEARD SQUEAKY BOOTS"

$9718 - 3509 = 6209$ (T) · $5561 - 155 = 5406$ (K) · $10603 - 3861 = 6742$ (B) · $9299 - 1087 = 8212$ (Q) · $5182 - 2469 = 2713$ (D) · $8778 - 2296 = 6482$ (G) · $11859 - 3007 = 8852$ (R) · $1559 - 182 = 1377$ (E) · $6282 - 1199 = 5083$ (U) · $8347 - 4706 = 3641$ (Y) · $5385 - 456 = 4929$ (S) · $6882 - 1828 = 5054$ (O) · $6831 - 1570 = 5261$ (H) · $9825 - 3914 = 5911$ (A)

Clue 4 (Multiplication facts (1-12)): "A BLONDE HAIR STRAND WAS ON THE LOCK"

$2 \times 7 = 14$ (A) · $11 \times 8 = 88$ (D) · $2 \times 1 = 2$ (E) · $12 \times 7 = 84$ (H) · $6 \times 6 = 36$ (I) · $7 \times 5 = 35$ (C) · $6 \times 12 = 72$ (L) · $11 \times 12 = 132$ (W) · $9 \times 6 = 54$ (T) · $11 \times 7 = 77$ (N) · $6 \times 2 = 12$ (O) · $8 \times 12 = 96$ (R) · $11 \times 1 = 11$ (B) · $7 \times 9 = 63$ (K) · $10 \times 2 = 20$ (S)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Lara Croft

$6 \div 2 = 3$ · $50 \div 10 = 5$ · $144 \div 12 = 12$ · $24 \div 12 = 2$ · $12 \div 3 = 4$ · $11 \div 1 = 11$ · $3 \div 3 = 1$ · $45 \div 5 = 9$ · $84 \div 12 = 7$ · $90 \div 9 = 10$ · $12 \div 2 = 6$