



The Lost Compass of Sunken Peak

Grade 6 math · Multiplication, Addition, Place value, Word problems, Division · Reading level grades 5-6

Detective: _____ Date: _____

An ancient golden compass vanished from the Sunken Peak Temple during an expedition. The lead archaeologist called upon top junior detectives to solve the mystery before the thief escapes the island.

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 Rival 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	SPECIAL TOOL	DOMINANT HAND	HAIR STYLE	DEFENSE USED
Eli Santos	Glider Wings	Grappling Hook	Right Handed	Braided Silver	Bright Flashlight
Owen Mercer	Scuba Suit	Glow Compass	Left Handed	Braided Silver	Bright Flashlight
Kai Tanaka	Magnetic Boots	Glider Canvas	Left Handed	Curly Jet Black	Bright Flashlight
Ruby Patel	Scuba Suit	Smoke Bomb	Left Handed	Braided Silver	Loud Whistle
Sofia Rossi	Grappling Gun	Glider Canvas	Right Handed	Braided Silver	Bright Flashlight
Grace O Sullivan	Magnetic Boots	Grappling Hook	Right Handed	Curly Jet Black	Bright Flashlight
Liam Thorne	Glider Wings	Glider Canvas	Right Handed	Spiky Copper	Mirror Shield
Ella Gupta	Magnetic Boots	Glider Canvas	Left Handed	Braided Silver	Loud Whistle
Chloe Dubois	Climbing Harness	Smoke Bomb	Left Handed	Braided Silver	Bright Flashlight
Leo Vance	Magnetic Boots	Signal Flare	Left Handed	Spiky Copper	Bright Flashlight
Zoe Park	Magnetic Boots	Glider Canvas	Left Handed	Braided Silver	Mirror Shield
Nora Chen	Scuba Suit	Glider Canvas	Left Handed	Braided Silver	Bright Flashlight
Caleb Vance	Magnetic Boots	Smoke Bomb	Right Handed	Braided Silver	Bright Flashlight
Noah Zhao	Glider Wings	Signal Flare	Left Handed	Spiky Copper	Bright Flashlight
Hugo Reyes	Grappling Gun	Signal Flare	Right Handed	Braided Silver	Bright Flashlight
Finn O Connor	Magnetic Boots	Glow Compass	Left Handed	Braided Silver	Bright Flashlight
Toby Walsh	Glider Wings	Signal Flare	Left Handed	Braided Silver	Bright Flashlight
Aria Novak	Scuba Suit	Grappling Hook	Right Handed	Curly Jet Black	Loud Whistle
Mia Kowalski	Grappling Gun	Grappling Hook	Left Handed	Spiky Copper	Bright Flashlight
Emma Lindqvist	Magnetic Boots	Grappling Hook	Right Handed	Curly Jet Black	Mirror Shield
Ava Brooks	Climbing Harness	Smoke Bomb	Left Handed	Spiky Copper	Loud Whistle

CLUE 1

Multiplication facts (1-12)

The temple floor is tiled in equal grid sections. Multiplying the rows gives us the first decoded secret clue.

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

T										T								T
8	24	2	6	3	6	108	2	32	8	63	81	2	6	36	81	8		
32	10	12	12	55	10	6	35	81	30	2	100	81	35	100				

$4 \times 2 = \square \rightarrow \boxed{\text{T}}$

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

$3 \times 1 = \square \rightarrow \boxed{\text{U}}$

$8 \times 4 = \square \rightarrow \boxed{\text{C}}$

$9 \times 9 = \square \rightarrow \boxed{\text{O}}$

$11 \times 5 = \square \rightarrow \boxed{\text{Y}}$

$10 \times 10 = \square \rightarrow \boxed{\text{B}}$

$1 \times 10 = \square \rightarrow \boxed{\text{A}}$

$12 \times 3 = \square \rightarrow \boxed{\text{N}}$

$1 \times 6 = \square \rightarrow \boxed{\text{S}}$

$9 \times 12 = \square \rightarrow \boxed{\text{P}}$

$4 \times 3 = \square \rightarrow \boxed{\text{R}}$

$8 \times 3 = \square \rightarrow \boxed{\text{H}}$

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

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

$3 \times 10 = \square \rightarrow \boxed{\text{K}}$

Scratch space:

CLUE 2 **Addition**

To track where the thief went, we need to sum up all the muddy footprints found across the three corridors.

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

Diagram illustrating the memory layout of a 2D array (rows by columns):

- Row 1 (Top): 16 boxes. The 1st, 13th, and 15th boxes are highlighted in orange and labeled 'T'. The numbers below the boxes are: 6736, 2984, 6874, 6014, 2375, 3656, 3656, 4017, 2375, 7015, 2651, 5706, 2375, 6736, 6874, 3571, 2651, 2375, 6736, 2984.
- Row 2 (Bottom): 12 boxes. The 1st, 9th, and 10th boxes are highlighted in orange and labeled 'T'. The numbers below the boxes are: 6736, 2984, 6874, 2375, 5706, 3656, 6874, 5163, 6736, 2984, 4017, 7015, 3500.

$$3600 + 3136 = \boxed{} \rightarrow \boxed{\text{T}}$$

$2698 + 3316 = \square \rightarrow \boxed{\mathbf{V}}$

$$1440 + 935 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$2663 + 2500 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$4280 + 2594 = \boxed{} \rightarrow \boxed{\text{E}}$$

$1456 + 2200 = \boxed{} \rightarrow \boxed{\text{L}}$

$2277 + 4738 = \square \rightarrow \boxed{\text{N}}$

$$3613 + 2093 = \boxed{} \rightarrow \boxed{\text{R}}$$

$1061 + 1923 = \boxed{} \rightarrow \boxed{\text{H}}$

$$1546 + 1105 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$1451 + 2120 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$2810 + 1207 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$1662 + 1838 = \boxed{} \rightarrow \boxed{\text{D}}$$

Scratch space:

CLUE 3 Place value

A locked stone gate displays a number panel. Finding the place value of the key digit unlocks the next piece of evidence.

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

T																			
2000	9000	30	5000	300	90	90	40	300	700	60	40	7000	4000	90	300	700	1000	30	1000
									T										T
4000	80	40	4000	8000	300	6000	9000	2000	100	90	40	7000	9000	90	300	6000	9000	2000	

What is the value of the 2 in 302,805? → **T**

What is the value of the 4 in 574,017? → **B**

What is the value of the 1 in 71,090? → **D**

What is the value of the 7 in 894,745? → **N**

What is the value of the 3 in 879,359? → **I**

What is the value of the 6 in 986,088? → **G**

What is the value of the 9 in 846,796? → **L**

What is the value of the 3 in 59,036? → **E**

What is the value of the 7 in 817,485? → **S**

What is the value of the 8 in 32,786? → **Y**

What is the value of the 9 in 869,142? → **H**

What is the value of the 5 in 105,334? → **V**

What is the value of the 8 in 98,179? → **R**

What is the value of the 6 in 381,065? → **W**

What is the value of the 1 in 37,155? → **F**

What is the value of the 4 in 91,742? → **A**

Scratch space:

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

The thief dropped a bag of ancient coins. Dividing them into equal piles helps us decode 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:

$8 \div 2 = \boxed{}$

$18 \div 3 = \boxed{}$

$63 \div 9 = \boxed{}$

$24 \div 3 = \boxed{}$

$63 \div 7 = \boxed{}$

$55 \div 5 = \boxed{}$

$4 \div 2 = \boxed{}$

$7 \div 7 = \boxed{}$

$80 \div 8 = \boxed{}$

$24 \div 8 = \boxed{}$

$132 \div 11 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swung across the chasm, then soared past the watchtower.
2. The villain walked up the iron door, then soared past the watchtower.
3. The villain walked up the iron door, then marked the exit trail.
4. The villain walked up the iron door, then lit up the dark tunnel.
5. The villain swam through the flooded tunnel, then lit up the dark tunnel.
6. The villain glided over the pit, then marked the exit trail.
7. The villain swam through the flooded tunnel, then soared past the watchtower.
8. The villain glided over the pit, then zipped up to the canopy.
9. The villain swung across the chasm, then zipped up to the canopy.
10. The villain glided over the pit, then lit up the dark tunnel.
11. The villain swung across the chasm, then lit up the dark tunnel.
12. The villain swam through the flooded tunnel, then marked the exit trail.

Answer Key

The Lost Compass of Sunken Peak

Culprit: Owen Mercer

Scuba Suit · Glow Compass · Left Handed · Braided Silver · Bright Flashlight

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SUSPECT DOES NOT CARRY A SMOKE BOMB"

$4 \times 2 = 8$ (T) · $2 \times 1 = 2$ (E) · $3 \times 1 = 3$ (U) · $8 \times 4 = 32$ (C) · $9 \times 9 = 81$ (O) · $11 \times 5 = 55$ (Y) · $10 \times 10 = 100$ (B) · $1 \times 10 = 10$ (A) · $12 \times 3 = 36$ (N) · $1 \times 6 = 6$ (S) · $9 \times 12 = 108$ (P) · $4 \times 3 = 12$ (R) · $8 \times 3 = 24$ (H) · $7 \times 5 = 35$ (M) · $9 \times 7 = 63$ (D) · $3 \times 10 = 30$ (K)

Clue 2 (Addition): "THE VILLAIN WRITES WITH THEIR LEFT HAND"

$3600 + 3136 = 6736$ (T) · $2698 + 3316 = 6014$ (V) · $1440 + 935 = 2375$ (I) · $2663 + 2500 = 5163$ (F) · $4280 + 2594 = 6874$ (E) · $1456 + 2200 = 3656$ (L) · $2277 + 4738 = 7015$ (N) · $3613 + 2093 = 5706$ (R) · $1061 + 1923 = 2984$ (H) · $1546 + 1105 = 2651$ (W) · $1451 + 2120 = 3571$ (S) · $2810 + 1207 = 4017$ (A) · $1662 + 1838 = 3500$ (D)

Clue 3 (Place value): "THE VILLAIN WAS BLINDED BY A BRIGHT FLASHLIGHT"

What is the value of the 2 in 302,805? = 2000 (T) · What is the value of the 4 in 574,017? = 4000 (B) · What is the value of the 1 in 71,090? = 1000 (D) · What is the value of the 7 in 894,745? = 700 (N) · What is the value of the 3 in 879,359? = 300 (I) · What is the value of the 6 in 986,088? = 6000 (G) · What is the value of the 9 in 846,796? = 90 (L) · What is the value of the 3 in 59,036? = 30 (E) · What is the value of the 7 in 817,485? = 7000 (S) · What is the value of the 8 in 32,786? = 80 (Y) · What is the value of the 9 in 869,142? = 9000 (H) · What is the value of the 5 in 105,334? = 5000 (V) · What is the value of the 8 in 98,179? = 8000 (R) · What is the value of the 6 in 381,065? = 60 (W) · What is the value of the 1 in 37,155? = 100 (F) · What is the value of the 4 in 91,742? = 40 (A)

Clue 4 (Word problems): "BRAIDED SILVER"

Detective Parker found 72 map scroll yesterday and 32 more today. How many map scroll in all? = 104 (B) · Detective Parker lined up 12 rows of 9 ruby artifact. How many ruby artifact in all? = 108 (I) · There were 70 map scroll. 23 were used up. How many map scroll are left? = 47 (E) · There were 112 ruby artifact. 27 were used up. How many ruby artifact are left? = 85 (S) · There were 154 map scroll. 34 were used up. How many map scroll are left? = 120 (R) · Detective Parker found 17 canteen yesterday and 21 more today. How many canteen in all? = 38 (D) · There were 112 ruby artifact. 12 were used up. How many ruby artifact are left? = 100 (A)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Owen Mercer

$8 \div 2 = 4$ · $18 \div 3 = 6$ · $63 \div 9 = 7$ · $24 \div 3 = 8$ · $63 \div 7 = 9$ · $55 \div 5 = 11$ · $4 \div 2 = 2$ · $7 \div 7 = 1$ · $80 \div 8 = 10$ · $24 \div 8 = 3$ · $132 \div 11 = 12$