The Case of the Sunken Sun Stone

Grade 7 math · Addition, Multiplication, Rounding, Word problems, Division · Reading level grades 7-9

Detective: _____ **Date:** _____

During a midnight expedition deep inside Serpent Ridge Temple, someone sabotaged the vault and vanished with an ancient relic. The camp was left in disarray, but careful field notes and clues hold the key to unmasking the intruder.

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 ARTIFACT	GADGET	STANCE	HAT STYLE	TRAJECTORY TRAP
Holly Hunter	Obsidian Key	Signal Flare	Right Handed	Pith Helmet	Dart Launcher
Fiona Glen	Obsidian Key	Grappling Hook	Left Handed	Pith Helmet	Dart Launcher
Leo Rivers	Ruby Beetle	Signal Flare	Right Handed	Safari Cap	Net Trap
Silas Thorne	Crystal Skull	Smoke Bomb	Left Handed	Fedora	Net Trap
Ivy Chen	Obsidian Key	Smoke Bomb	Right Handed	Safari Cap	Dart Launcher
Paige Turner	Golden Compass	Sound Decoy	Right Handed	Pith Helmet	Pitfall Fallback
Sam Danger	Golden Compass	Flash Beacon	Left Handed	Safari Cap	Pitfall Fallback
Maya Lin	Ruby Beetle	Smoke Bomb	Right Handed	Safari Cap	Net Trap
Amelia Earhart	Golden Compass	Sound Decoy	Right Handed	Safari Cap	Net Trap
Jack Mercer	Crystal Skull	Grappling Hook	Right Handed	Pith Helmet	Net Trap
Elena Cruz	Golden Compass	Signal Flare	Right Handed	Pith Helmet	Pitfall Fallback
Rupert Finch	Crystal Skull	Smoke Bomb	Left Handed	Pith Helmet	Net Trap
Harrison Ford	Crystal Skull	Grappling Hook	Right Handed	Pith Helmet	Dart Launcher
Brody Vance	Golden Compass	Signal Flare	Right Handed	Fedora	Net Trap
Captain Sterling	Obsidian Key	Smoke Bomb	Right Handed	Pith Helmet	Net Trap
Jasper Cole	Ruby Beetle	Sound Decoy	Right Handed	Safari Cap	Net Trap
Zane Cross	Obsidian Key	Flash Beacon	Right Handed	Safari Cap	Net Trap
Dr Marcus Vance	Ruby Beetle	Grappling Hook	Right Handed	Pith Helmet	Net Trap
Victor Stone	Ruby Beetle	Signal Flare	Left Handed	Safari Cap	Pitfall Fallback
Clara Oswald	Jade Idol	Grappling Hook	Left Handed	Safari Cap	Net Trap
Professor Drake	Crystal Skull	Signal Flare	Right Handed	Safari Cap	Dart Launcher

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CLUE 1 Addition

We tallied the total supply crates found near the campsite to trace where the rogue explorer fled.

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



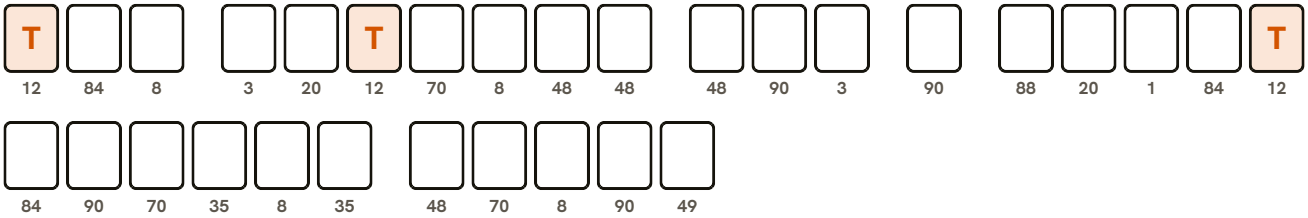
1345 + 1913 = ☐ → T	2078 + 1738 = ☐ → L	1556 + 3039 = ☐ → C
3301 + 2623 = ☐ → D	2354 + 4049 = ☐ → B	5071 + 2661 = ☐ → E
4222 + 4215 = ☐ → F	2723 + 2311 = ☐ → V	1486 + 1141 = ☐ → H
1811 + 1403 = ☐ → I	2506 + 1381 = ☐ → A	2105 + 2729 = ☐ → S
4262 + 4451 = ☐ → U	2698 + 2367 = ☐ → N	1034 + 1548 = ☐ → O

Scratch space:

CLUE 2 Multiplication facts (1-12)

> Examining the temple floor tiles, we calculated the total grid area to pinpoint the hidden latch.

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



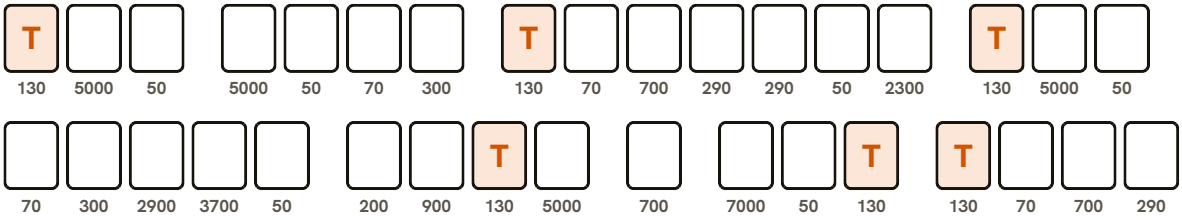
6 × 2 = ☐ → T	8 × 11 = ☐ → R	8 × 6 = ☐ → S	1 × 1 = ☐ → G
4 × 5 = ☐ → I	7 × 10 = ☐ → N	1 × 3 = ☐ → W	2 × 4 = ☐ → E
10 × 9 = ☐ → A	12 × 7 = ☐ → H	7 × 7 = ☐ → K	
5 × 7 = ☐ → D			

Scratch space:

CLUE 3 Rounding

> The digital sonar scanner only displays rounded distance readouts, so we estimated our depth.

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



Round 126 to the nearest ten ☐ → **T**

Round 54 to the nearest ten ☐ → **E**

Round 887 to the nearest hundred ☐ → **I**

Round 3,694 to the nearest hundred ☐ → **U**

Round 4,571 to the nearest thousand ☐ → **H**

Round 266 to the nearest hundred ☐ → **O**

Round 68 to the nearest ten ☐ → **R**

Round 6,542 to the nearest thousand ☐ → **N**

Round 2,872 to the nearest hundred ☐ → **G**

Round 239 to the nearest hundred ☐ → **W**

Round 2,318 to the nearest hundred ☐ → **D**

Round 713 to the nearest hundred ☐ → **A**

Round 293 to the nearest ten ☐ → **P**

Scratch space:

CLUE 4 Word problems

We decoded the ledger notes from the camp stash to track how the stolen gear was moved.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A strand of | S | | | | | | | | | hair turned up at the scene.

44	42	105	42	65	16	83	42	18

Expedition scout found 20 compasses yesterday and 24 more today. How many compasses in all?

Answer: ☐ → **S**

There were 132 lanterns. 27 were used up. How many lanterns are left?

Answer: ☐ → **F**

There were 71 map scrolls. 6 were used up. How many map scrolls are left?

Answer: ☐ → **R**

There were 117 rope coils. 34 were used up. How many rope coils are left?

Answer: ☐ → **C**

Expedition scout lined up 8 rows of 2 compasses. How many compasses in all?

Answer: ☐ → **I**

Expedition scout lined up 2 rows of 9 lanterns. How many lanterns in all?

Answer: ☐ → **P**

There were 82 map scrolls. 40 were used up. How many map scrolls are left?

Answer: ☐ → **A**

Scratch space:

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

> Splitting the recovery rations evenly among the scouts helped us measure the journey back.

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:

36 ÷ 6 = ☐ | 120 ÷ 12 = ☐ | 22 ÷ 11 = ☐ | 44 ÷ 11 = ☐ | 84 ÷ 12 = ☐

24 ÷ 8 = ☐ | 99 ÷ 11 = ☐ | 32 ÷ 4 = ☐ | 35 ÷ 7 = ☐ | 132 ÷ 11 = ☐

7 ÷ 7 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain secured the crystal skull, then deployed a grappling hook.
2. The villain grabbed the ruby beetle, then set off a sound decoy.
3. The villain pocketed the jade idol, then deployed a grappling hook.
4. The villain grabbed the ruby beetle, then triggered a flash beacon.
5. The villain secured the crystal skull, then fired a signal flare.
6. The villain snatched the golden compass, then set off a sound decoy.
7. The villain snatched the golden compass, then dropped a smoke bomb.
8. The villain grabbed the ruby beetle, then deployed a grappling hook.
9. The villain pocketed the jade idol, then triggered a flash beacon.
10. The villain grabbed the ruby beetle, then fired a signal flare.
11. The villain grabbed the ruby beetle, then dropped a smoke bomb.
12. The villain pocketed the jade idol, then fired a signal flare.

TEACHER / PARENT

Answer Key

The Case of the Sunken Sun Stone

Culprit: Maya Lin

Ruby Beetle · Smoke Bomb · Right Handed · Safari Cap · Net Trap

Trail: Start 21 → Clue 1 19 → Clue 2 14 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DID NOT USE A FLASH BEACON"

1345 + 1913 = 3258 (T) · 2078 + 1738 = 3816 (L) · 1556 + 3039 = 4595 (C) · 3301 + 2623 = 5924 (D) · 2354 + 4049 = 6403 (B) · 5071 + 2661 = 7732 (E) · 4222 + 4215 = 8437 (F) · 2723 + 2311 = 5034 (V) · 1486 + 1141 = 2627 (H) · 1811 + 1403 = 3214 (I) · 2506 + 1381 = 3887 (A) · 2105 + 2729 = 4834 (S) · 4262 + 4451 = 8713 (U) · 2698 + 2367 = 5065 (N) · 1034 + 1548 = 2582 (O)

Clue 2 (Multiplication facts (1-12)): "THE WITNESS SAW A RIGHT HANDED SNEAK"

6 × 2 = 12 (T) · 8 × 11 = 88 (R) · 8 × 6 = 48 (S) · 1 × 1 = 1 (G) · 4 × 5 = 20 (I) · 7 × 10 = 70 (N) · 1 × 3 = 3 (W) · 2 × 4 = 8 (E) · 10 × 9 = 90 (A) · 12 × 7 = 84 (H) · 7 × 7 = 49 (K) · 5 × 7 = 35 (D)

Clue 3 (Rounding): "THE HERO TRAPPED THE ROGUE WITH A NET TRAP"

Round 126 to the nearest ten = 130 (T) · Round 54 to the nearest ten = 50 (E) · Round 887 to the nearest hundred = 900 (I) · Round 3,694 to the nearest hundred = 3700 (U) · Round 4,571 to the nearest thousand = 5000 (H) · Round 266 to the nearest hundred = 300 (O) · Round 68 to the nearest ten = 70 (R) · Round 6,542 to the nearest thousand = 7000 (N) · Round 2,872 to the nearest hundred = 2900 (G) · Round 239 to the nearest hundred = 200 (W) · Round 2,318 to the nearest hundred = 2300 (D) · Round 713 to the nearest hundred = 700 (A) · Round 293 to the nearest ten = 290 (P)

Clue 4 (Word problems): "SAFARI CAP"

Expedition scout found 20 compasses yesterday and 24 more today. How many compasses in all? = 44 (S) · There were 132 lanterns. 27 were used up. How many lanterns are left? = 105 (F) · There were 71 map scrolls. 6 were used up. How many map scrolls are left? = 65 (R) · There were 117 rope coils. 34 were used up. How many rope coils are left? = 83 (C) · Expedition scout lined up 8 rows of 2 compasses. How many compasses in all? = 16 (I) · Expedition scout lined up 2 rows of 9 lanterns. How many lanterns in all? = 18 (P) · There were 82 map scrolls. 40 were used up. How many map scrolls are left? = 42 (A)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Maya Lin

36 ÷ 6 = 6 · 120 ÷ 12 = 10 · 22 ÷ 11 = 2 · 44 ÷ 11 = 4 · 84 ÷ 12 = 7 · 24 ÷ 8 = 3 · 99 ÷ 11 = 9 · 32 ÷ 4 = 8 · 35 ÷ 7 = 5 · 132 ÷ 11 = 12 · 7 ÷ 7 = 1