The Case of the Missing Sun Stone

Grade 2 math · Multiplication, Place value, Addition, Subtraction, Missing addends · Reading level grades 5-6

Detective: _____ **Date:** _____

During an expedition to the ancient Serpent Ridge ruins, someone snatched the legendary Sun Stone right from the central altar chamber! The suspect left behind broken traps, strange gear, and dropped equipment across the temple grounds. Help the Trailfinders Guild decode the clues and unmask the culprit before they escape into the jungle.

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.

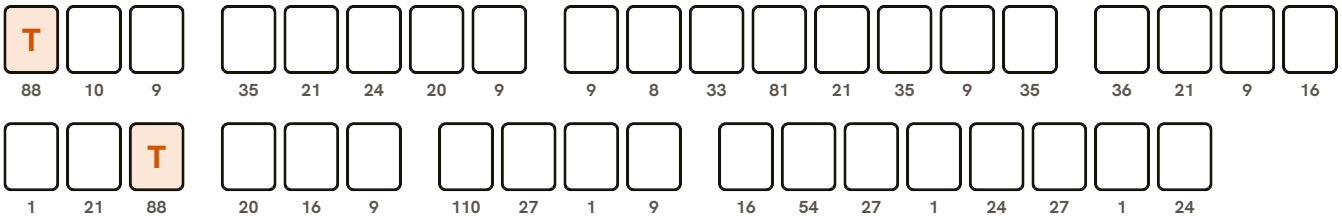
NAME	SPECIAL GEAR	EXPLORATION SKILL	STANCE	BANDANA COLOR	DISTRACTION ITEM
Capt Amelia Vance	Torch Array	Lock Deciphering	Left-Handed Grip	Cobalt Bandana	Whistle Blast
Mateo Cruz	Compass Dial	Wall Climbing	Left-Handed Grip	Cobalt Bandana	Mirror Reflection
Nora Chen	Torch Array	Trap Disarming	Left-Handed Grip	Golden Bandana	Mirror Reflection
Marcus Flint	Torch Array	Track Reading	Right-Handed Grip	Crimson Bandana	Flashlight Beam
Samira Khan	Grappling Hook	Vine Swinging	Right-Handed Grip	Cobalt Bandana	Mirror Reflection
Tariq Al-Mansoor	Compass Dial	Lock Deciphering	Right-Handed Grip	Cobalt Bandana	Mirror Reflection
Oscar Zhang	Compass Dial	Track Reading	Left-Handed Grip	Cobalt Bandana	Mirror Reflection
Jonas Drake	Glider Pack	Track Reading	Left-Handed Grip	Cobalt Bandana	Mirror Reflection
Clara Delgado	Grappling Hook	Wall Climbing	Left-Handed Grip	Golden Bandana	Mirror Reflection
Oliver Finch	Smoke Pellets	Wall Climbing	Right-Handed Grip	Crimson Bandana	Flashlight Beam
Sophia Brooks	Smoke Pellets	Lock Deciphering	Right-Handed Grip	Cobalt Bandana	Mirror Reflection
Nadia Patel	Torch Array	Vine Swinging	Left-Handed Grip	Cobalt Bandana	Mirror Reflection
Leo Vance	Smoke Pellets	Lock Deciphering	Right-Handed Grip	Crimson Bandana	Flashlight Beam
Maya Lin	Torch Array	Trap Disarming	Left-Handed Grip	Crimson Bandana	Whistle Blast
Victor Sterling	Compass Dial	Vine Swinging	Left-Handed Grip	Cobalt Bandana	Flashlight Beam
Dr Hugo Sterling	Smoke Pellets	Wall Climbing	Left-Handed Grip	Golden Bandana	Mirror Reflection
Isabel Gomez	Compass Dial	Lock Deciphering	Left-Handed Grip	Cobalt Bandana	Mirror Reflection
Evelyn Cross	Compass Dial	Wall Climbing	Left-Handed Grip	Crimson Bandana	Whistle Blast
Felix Thorne	Glider Pack	Trap Disarming	Left-Handed Grip	Golden Bandana	Flashlight Beam
Elena Rostova	Smoke Pellets	Trap Disarming	Left-Handed Grip	Crimson Bandana	Mirror Reflection
Maya Bishop	Torch Array	Lock Deciphering	Right-Handed Grip	Cobalt Bandana	Flashlight Beam

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CLUE 1 Multiplication facts (1-12)

> Inside the temple entryway, tile patterns on the stone floor are organized in equal rows. Solving this array code reveals the first clue.

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



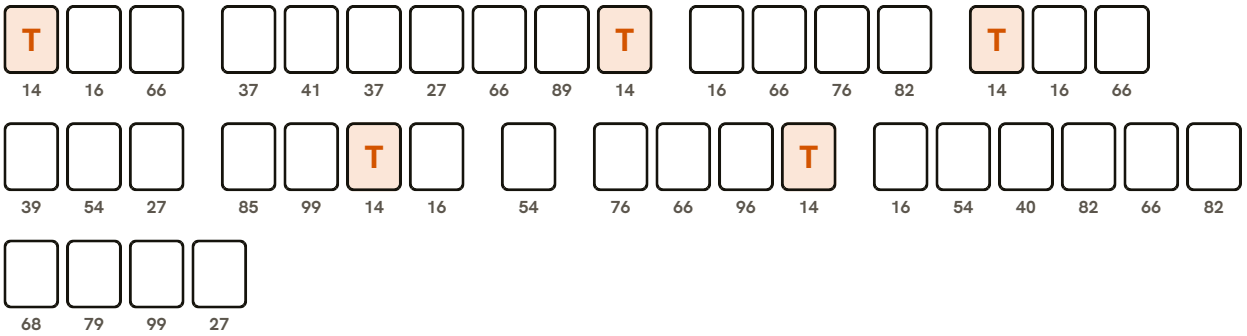
8 × 11 = ☐ → T	3 × 11 = ☐ → P	3 × 7 = ☐ → O	
9 × 9 = ☐ → L	11 × 10 = ☐ → V	2 × 8 = ☐ → S	
3 × 3 = ☐ → E	5 × 2 = ☐ → H	8 × 1 = ☐ → X	2 × 10 = ☐ → U
1 × 1 = ☐ → N	7 × 5 = ☐ → R	9 × 3 = ☐ → I	6 × 9 = ☐ → W
12 × 3 = ☐ → D	3 × 8 = ☐ → G		

Scratch space:

CLUE 2 Place value

A carved stone pedestal displays glowing glyphs with distinct tens and ones places. Deciphering the exact value unlocks the next lead.

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



What number has 1 ten and 4 ones? ☐ → T

What number has 6 tens and 6 ones? ☐ → E

What number has 9 tens and 9 ones? ☐ → I

What number has 3 tens and 9 ones? ☐ → M

What number has 9 tens and 6 ones? ☐ → F

What number has 7 tens and 9 ones? ☐ → R

What number has 8 tens and 2 ones? ☐ → D

What number has 4 tens and 1 one? ☐ → U

What number has 2 tens and 7 ones? ☐ → P

What number has 8 tens and 9 ones? ☐ → C

What number has 1 ten and 6 ones? ☐ → H

What number has 3 tens and 7 ones? ☐ → S

What number has 5 tens and 4 ones? ☐ → A

What number has 8 tens and 5 ones? ☐ → W

What number has 4 tens and 0 ones? ☐ → N

What number has 6 tens and 8 ones? ☐ → G

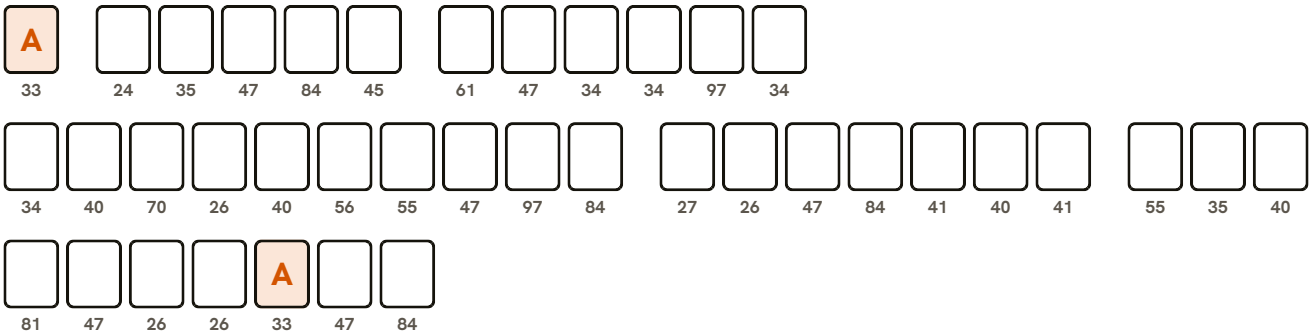
What number has 7 tens and 6 ones? ☐ → L

Scratch space:

CLUE 3 Addition

> The expedition logbook lists supplies gathered from two different campsites. Adding these totals together clears up the suspect evidence.

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



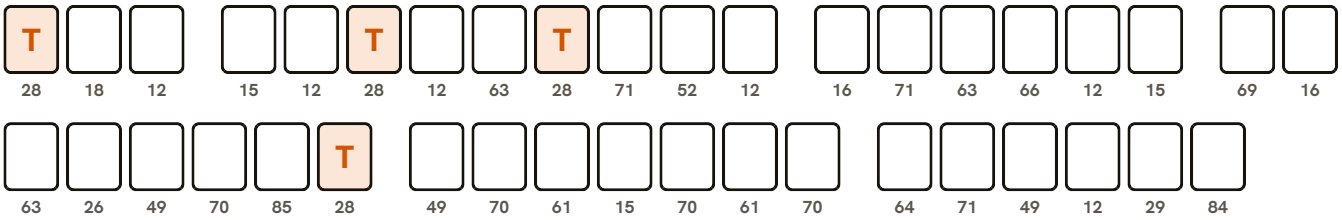
9 + 24 = ☐ → A	61 + 36 = ☐ → O	42 + 42 = ☐ → N
30 + 17 = ☐ → I	28 + 12 = ☐ → E	13 + 21 = ☐ → R
12 + 23 = ☐ → H	17 + 7 = ☐ → S	37 + 44 = ☐ → V
26 + 44 = ☐ → F	21 + 40 = ☐ → M	17 + 38 = ☐ → T
23 + 22 = ☐ → Y	18 + 8 = ☐ → L	18 + 38 = ☐ → C
13 + 28 = ☐ → D	10 + 17 = ☐ → B	

Scratch space:

CLUE 4 Subtraction

> Comparing the total number of brass lanterns brought into the cavern against what remains shows the difference needed for the fourth clue.

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



36 - 8 = ☐ → T	117 - 33 = ☐ → S	70 - 1 = ☐ → U
31 - 19 = ☐ → E	108 - 38 = ☐ → A	69 - 20 = ☐ → B
111 - 40 = ☐ → I	86 - 25 = ☐ → N	57 - 28 = ☐ → R
104 - 40 = ☐ → F	63 - 11 = ☐ → V	27 - 9 = ☐ → H
26 - 11 = ☐ → D	64 - 1 = ☐ → C	97 - 31 = ☐ → K
50 - 24 = ☐ → O	50 - 34 = ☐ → P	123 - 38 = ☐ → L

Scratch space:

CLUE 5 Missing addends - the last clue

> A heavy balance scale requires a specific target weight of golden relics to balance out. Calculating the missing amount reveals 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:

7 + ___ = 8 ☐	2 + ___ = 10 ☐	7 + ___ = 13 ☐	10 + ___ = 14 ☐
4 + ___ = 16 ☐	7 + ___ = 14 ☐	6 + ___ = 16 ☐	2 + ___ = 11 ☐
8 + ___ = 11 ☐	1 + ___ = 3 ☐	4 + ___ = 15 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain navigated corridors with a compass dial, then deciphered the ancient lock dials.
2. The villain blinded guards using smoke pellets, then followed footprints along the muddy track.
3. The villain lit the secret passage using a torch array, then disarmed the dart traps.
4. The villain zapped the lock with a grappling hook, then disarmed the dart traps.
5. The villain navigated corridors with a compass dial, then scrambled up the stone wall.
6. The villain soared off the balcony using a glider pack, then followed footprints along the muddy track.
7. The villain soared off the balcony using a glider pack, then disarmed the dart traps.
8. The villain navigated corridors with a compass dial, then followed footprints along the muddy track.
9. The villain lit the secret passage using a torch array, then swung across the canyon vines.
10. The villain zapped the lock with a grappling hook, then swung across the canyon vines.
11. The villain zapped the lock with a grappling hook, then followed footprints along the muddy track.
12. The villain blinded guards using smoke pellets, then swung across the canyon vines.

TEACHER / PARENT

Answer Key

The Case of the Missing Sun Stone

Culprit: Mateo Cruz

Compass Dial · Wall Climbing · Left-Handed Grip · Cobalt Bandana · Mirror Reflection

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE ROGUE EXPLORER DOES NOT USE VINE SWINGING"

8 × 11 = 88 (T) · 3 × 11 = 33 (P) · 3 × 7 = 21 (O) · 9 × 9 = 81 (L) · 11 × 10 = 110 (V) · 2 × 8 = 16 (S) · 3 × 3 = 9 (E) · 5 × 2 = 10 (H) · 8 × 1 = 8 (X) · 2 × 10 = 20 (U) · 1 × 1 = 1 (N) · 7 × 5 = 35 (R) · 9 × 3 = 27 (I) · 6 × 9 = 54 (W) · 12 × 3 = 36 (D) · 3 × 8 = 24 (G)

Clue 2 (Place value): "THE SUSPECT HELD THE MAP WITH A LEFT HANDED GRIP"

What number has 1 ten and 4 ones? = 14 (T) · What number has 6 tens and 6 ones? = 66 (E) · What number has 9 tens and 9 ones? = 99 (I) · What number has 3 tens and 9 ones? = 39 (M) · What number has 9 tens and 6 ones? = 96 (F) · What number has 7 tens and 9 ones? = 79 (R) · What number has 8 tens and 2 ones? = 82 (D) · What number has 4 tens and 1 one? = 41 (U) · What number has 2 tens and 7 ones? = 27 (P) · What number has 8 tens and 9 ones? = 89 (C) · What number has 1 ten and 6 ones? = 16 (H) · What number has 3 tens and 7 ones? = 37 (S) · What number has 5 tens and 4 ones? = 54 (A) · What number has 8 tens and 5 ones? = 85 (W) · What number has 4 tens and 0 ones? = 40 (N) · What number has 6 tens and 8 ones? = 68 (G) · What number has 7 tens and 6 ones? = 76 (L)

Clue 3 (Addition): "A SHINY MIRROR REFLECTION BLINDED THE VILLAIN"

9 + 24 = 33 (A) · 61 + 36 = 97 (O) · 42 + 42 = 84 (N) · 30 + 17 = 47 (I) · 28 + 12 = 40 (E) · 13 + 21 = 34 (R) · 12 + 23 = 35 (H) · 17 + 7 = 24 (S) · 37 + 44 = 81 (V) · 26 + 44 = 70 (F) · 21 + 40 = 61 (M) · 17 + 38 = 55 (T) · 23 + 22 = 45 (Y) · 18 + 8 = 26 (L) · 18 + 38 = 56 (C) · 13 + 28 = 41 (D) · 10 + 17 = 27 (B)

Clue 4 (Subtraction): "THE DETECTIVE PICKED UP COBALT BANDANA FIBERS"

36 - 8 = 28 (T) · 117 - 33 = 84 (S) · 70 - 1 = 69 (U) · 31 - 19 = 12 (E) · 108 - 38 = 70 (A) · 69 - 20 = 49 (B) · 111 - 40 = 71 (I) · 86 - 25 = 61 (N) · 57 - 28 = 29 (R) · 104 - 40 = 64 (F) · 63 - 11 = 52 (V) · 27 - 9 = 18 (H) · 26 - 11 = 15 (D) · 64 - 1 = 63 (C) · 97 - 31 = 66 (K) · 50 - 24 = 26 (O) · 50 - 34 = 16 (P) · 123 - 38 = 85 (L)

Clue 5 (Missing addends): surviving statement is box 5 → Mateo Cruz

7 + ___ = 8 = 1 · 2 + ___ = 10 = 8 · 7 + ___ = 13 = 6 · 10 + ___ = 14 = 4 · 4 + ___ = 16 = 12 · 7 + ___ = 14 = 7 · 6 + ___ = 16 = 10 · 2 + ___ = 11 = 9 · 8 + ___ = 11 = 3 · 1 + ___ = 3 = 2 · 4 + ___ = 15 = 11