



Mystery of the Sunken Sun Stone

Grade 6 math · Percentages, Exponents, Order of operations, Multiplication, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

During a midnight storm, someone broke into the inner vault of the Temple of the Golden Jaguar and triggered the security locks. The Chief Archaeologist needs your help to crack the codes, analyze the evidence, and identify the intruder before they escape 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 temple intruder is _____

Possible suspects

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

NAME	GADGET	RELIC	HABIT	BANDANA COLOR	TRAP VULNERABILITY
Mateo	Grappling Hook	Jade Snake	Twirls coin	Blue Bandana	Net Traps
Maya	Pocket Compass	Ruby Beetle	Twirls coin	Gold Bandana	Dart Traps
Zara	Smoke Bomb	Silver Falcon	Twirls coin	Gold Bandana	Net Traps
Hugo	Smoke Bomb	Amber Turtle	Taps boots	Gold Bandana	Dart Traps
Cora	Smoke Bomb	Crystal Monkey	Twirls coin	Blue Bandana	Net Traps
Nina	Pocket Compass	Silver Falcon	Taps boots	Blue Bandana	Net Traps
Leo	Smoke Bomb	Silver Falcon	Twirls coin	Blue Bandana	Net Traps
Gemma	Smoke Bomb	Crystal Monkey	Taps boots	Gold Bandana	Dart Traps
Elena	Grappling Hook	Amber Turtle	Taps boots	Blue Bandana	Pit Traps
Cleo	Smoke Bomb	Amber Turtle	Twirls coin	Blue Bandana	Net Traps
Clara	Pocket Compass	Crystal Monkey	Twirls coin	Gold Bandana	Dart Traps
Sam	Rope Dart	Amber Turtle	Taps boots	Gold Bandana	Net Traps
Axel	Pocket Compass	Crystal Monkey	Twirls coin	Blue Bandana	Net Traps
Bruno	Brass Telescope	Crystal Monkey	Taps boots	Red Bandana	Pit Traps
Oscar	Smoke Bomb	Ruby Beetle	Taps boots	Red Bandana	Dart Traps
Iris	Pocket Compass	Jade Snake	Twirls coin	Blue Bandana	Pit Traps
Finn	Pocket Compass	Amber Turtle	Taps boots	Blue Bandana	Dart Traps
Diego	Rope Dart	Silver Falcon	Twirls coin	Blue Bandana	Dart Traps
Felix	Brass Telescope	Jade Snake	Taps boots	Gold Bandana	Dart Traps
Indiana	Grappling Hook	Silver Falcon	Taps boots	Red Bandana	Net Traps
Sofia	Grappling Hook	Silver Falcon	Twirls coin	Blue Bandana	Dart Traps

CLUE 1

The temple decoder ring reveals what percentage of power cells remain active in the vault door.

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

A 2x10 grid of boxes. The top row contains the following sequence: an orange box with 'T', three empty boxes, an orange box with 'T', and six empty boxes. The bottom row contains the following sequence: five empty boxes, an orange box with 'T', three empty boxes, four empty boxes, an orange box with 'T', two empty boxes, an orange box with 'T', and three empty boxes.

T																			
28	33	18	39	11	18	43	8	10	41	18	39	11	41	28					
44	43	12	12	6	28	33	18	43	3	27	18	12	28	4	12	28	19	18	

40% of 70 = → **T**

50% of 36 = → **E**

50% of 66 = → **H**

75% of 4 = → **M**

5% of 780 = → **S**

50% of 86 = → **A**

25% of 164 = →

20% of 40 = → **K**

10% of 100 = → **D**

20% of 30 = → **Y**

5% of 540 = → **B**

25% of 48 = $\rightarrow$ **R**

10% of 190 = → **L**

20% of 55 = → **N**

25% of 176 = → **C**

20% of 20 = → **U**

Scratch space:

CLUE 2 Exponents

To calculate the energy grid output, the camp scanner multiplies base grid nodes by powers of ten.

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

T									T							
128	100	256	289	121	289	343	256	169	128	16	225	289	289	256	256	49

T													
128	16	64	8	81	64	49	324	225	169	4	64	49	

$2^7 = \square \rightarrow \text{T}$	$11^2 = \square \rightarrow \text{U}$	$10^2 = \square \rightarrow \text{H}$	$7^2 = \square \rightarrow \text{N}$
$2^3 = \square \rightarrow \text{R}$	$2^2 = \square \rightarrow \text{O}$	$18^2 = \square \rightarrow \text{G}$	$16^2 = \square \rightarrow \text{E}$
$3^4 = \square \rightarrow \text{L}$	$7^3 = \square \rightarrow \text{P}$	$17^2 = \square \rightarrow \text{S}$	$15^2 = \square \rightarrow \text{A}$
$4^3 = \square \rightarrow \text{I}$	$4^2 = \square \rightarrow \text{W}$	$13^2 = \square \rightarrow \text{C}$	

Scratch space:

CLUE 3
Order of operations

The ancient lock log requires solving step by step priority rules to figure out the code sequence.

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

T			T					T										
27	30	38	27	78	32	60	38	27	77	78	33	27	32	78	46	46	38	13

				T					
31	64	6	38	27	27	32	78	46	33

$9 + 9 \times 2 = \square \rightarrow \boxed{\text{T}}$

$11 \times 4 - 6 = \square \rightarrow \boxed{\text{E}}$

$6 \times 12 - 26 = \square \rightarrow \boxed{\text{P}}$

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

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

$23 + 3 \times 3 = \square \rightarrow \boxed{\text{R}}$

$1 + 3 \times 4 = \square \rightarrow \boxed{\text{D}}$

$15 + 9 \times 7 = \square \rightarrow \boxed{\text{A}}$

$5 + 5 \times 5 = \square \rightarrow \boxed{\text{H}}$

$8 \times 11 - 24 = \square \rightarrow \boxed{\text{Y}}$

$12 \times 5 - 29 = \square \rightarrow \boxed{\text{B}}$

$6 \times 3 - 12 = \square \rightarrow \boxed{\text{N}}$

$8 \times 6 - 15 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

Examining the supply crates stacked in equal rows helps estimate total expedition rations.

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

B				B									B			
36	3	96	90	36	100	6	2	100	6	100	7	14	36	90	121	110
12	90	121	90	7	4	96	6	2	100	63	110	72	90	6	90	

$4 \times 9 = \square \rightarrow \text{B}$

$7 \times 9 = \square \rightarrow \text{T}$

$10 \times 9 = \square \rightarrow \text{E}$

$11 \times 11 = \square \rightarrow \text{R}$

$1 \times 4 = \square \rightarrow \text{O}$

$1 \times 3 = \square \rightarrow \text{L}$

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

$2 \times 1 = \square \rightarrow \text{D}$

$4 \times 3 = \square \rightarrow \text{W}$

$1 \times 6 = \square \rightarrow \text{N}$

$2 \times 7 = \square \rightarrow \text{I}$

$8 \times 12 = \square \rightarrow \text{U}$

$9 \times 8 = \square \rightarrow \text{C}$

$10 \times 11 = \square \rightarrow \text{S}$

$7 \times 1 = \square \rightarrow \text{F}$

Scratch space:

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

Dividing the ancient map fragments equally among search teams pinpoints the precise site.

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:

$121 \div 11 = \boxed{}$

$2 \div 2 = \boxed{}$

$100 \div 10 = \boxed{}$

$20 \div 10 = \boxed{}$

$15 \div 5 = \boxed{}$

$90 \div 10 = \boxed{}$

$64 \div 8 = \boxed{}$

$21 \div 3 = \boxed{}$

$84 \div 7 = \boxed{}$

$20 \div 5 = \boxed{}$

$30 \div 6 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain vanished into darkness with a smoke bomb, then stole the ceremonial silver falcon.
2. The villain swung across the chasm with a rope dart, then swiped the ancient amber turtle.
3. The villain spied on the camp with a brass telescope, then stole the ceremonial silver falcon.
4. The villain navigated the maze using a pocket compass, then stole the ceremonial silver falcon.
5. The villain vanished into darkness with a smoke bomb, then snatched the sacred ruby beetle.
6. The villain vanished into darkness with a smoke bomb, then grabbed the shiny crystal monkey.
7. The villain swung across the chasm with a rope dart, then snatched the sacred ruby beetle.
8. The villain navigated the maze using a pocket compass, then snatched the sacred ruby beetle.
9. The villain scaled the high wall with a grappling hook, then swiped the ancient amber turtle.
10. The villain navigated the maze using a pocket compass, then grabbed the shiny crystal monkey.
11. The villain scaled the high wall with a grappling hook, then pocketed the glowing jade snake.
12. The villain swung across the chasm with a rope dart, then grabbed the shiny crystal monkey.

Answer Key

Mystery of the Sunken Sun Stone

Culprit: Cora

Smoke Bomb · Crystal Monkey · Twirls coin · Blue Bandana · Net Traps

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE SNEAK DOES NOT CARRY THE AMBER TURTLE"

40% of 70 = 28 (T) · 50% of 36 = 18 (E) · 50% of 66 = 33 (H) · 75% of 4 = 3 (M) · 5% of 780 = 39 (S) · 50% of 86 = 43 (A) · 25% of 164 = 41 (O) · 20% of 40 = 8 (K) · 10% of 100 = 10 (D) · 20% of 30 = 6 (Y) · 5% of 540 = 27 (B) · 25% of 48 = 12 (R) · 10% of 190 = 19 (L) · 20% of 55 = 11 (N) · 25% of 176 = 44 (C) · 20% of 20 = 4 (U)

Clue 2 (Exponents): "THE SUSPECT WAS SEEN TWIRLING A COIN"

$2^7 = 128$ (T) · $11^2 = 121$ (U) · $10^2 = 100$ (H) · $7^2 = 49$ (N) · $2^3 = 8$ (R) · $2^2 = 4$ (O) · $18^2 = 324$ (G) · $16^2 = 256$ (E) · $3^4 = 81$ (L) · $7^3 = 343$ (P) · $17^2 = 289$ (S) · $15^2 = 225$ (A) · $4^3 = 64$ (I) · $4^2 = 16$ (W) · $13^2 = 169$ (C)

Clue 3 (Order of operations): "THE TARGET WAS TRAPPED BY NET TRAPS"

$9 + 9 \times 2 = 27$ (T) · $11 \times 4 - 6 = 38$ (E) · $6 \times 12 - 26 = 46$ (P) · $7 \times 12 - 7 = 77$ (W) · $6 + 9 \times 6 = 60$ (G) · $23 + 3 \times 3 = 32$ (R) · $1 + 3 \times 4 = 13$ (D) · $15 + 9 \times 7 = 78$ (A) · $5 + 5 \times 5 = 30$ (H) · $8 \times 11 - 24 = 64$ (Y) · $12 \times 5 - 29 = 31$ (B) · $6 \times 3 - 12 = 6$ (N) · $8 \times 6 - 15 = 33$ (S)

Clue 4 (Multiplication facts (1-12)): "BLUE BANDANA FIBERS WERE FOUND AT SCENE"

$4 \times 9 = 36$ (B) · $7 \times 9 = 63$ (T) · $10 \times 9 = 90$ (E) · $11 \times 11 = 121$ (R) · $1 \times 4 = 4$ (O) · $1 \times 3 = 3$ (L) · $10 \times 10 = 100$ (A) · $2 \times 1 = 2$ (D) · $4 \times 3 = 12$ (W) · $1 \times 6 = 6$ (N) · $2 \times 7 = 14$ (I) · $8 \times 12 = 96$ (U) · $9 \times 8 = 72$ (C) · $10 \times 11 = 110$ (S) · $7 \times 1 = 7$ (F)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Cora

$121 \div 11 = 11$ · $2 \div 2 = 1$ · $100 \div 10 = 10$ · $20 \div 10 = 2$ · $15 \div 5 = 3$ · $90 \div 10 = 9$ · $64 \div 8 = 8$ · $21 \div 3 = 7$ · $84 \div 7 = 12$ · $20 \div 5 = 4$ · $30 \div 6 = 5$