



Mystery of the Sunken Sun Temple

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

Detective: _____ **Date:** _____

Deep in the jungle, a ancient artifact has vanished from the Sun Temple vault. Chief Archaeologist Dr. Rivera needs your team to analyze the clues and catch 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 TOOL	GADGET	TAPPING HABIT	BANDANA COLOR	FEAR
Nora	Smoke Bomb	Signal Flare	Taps Left Foot	Green Bandana	Bright Lights
Jack	Climbing Gear	Recon Drone	Taps Right Foot	Green Bandana	Loud Whistles
Leo	Climbing Gear	Recon Drone	Taps Right Foot	Blue Bandana	Loud Whistles
Diego	Metal Detector	Pocket Compass	Taps Left Foot	Green Bandana	Bright Lights
Isla	Climbing Gear	Recon Drone	Taps Right Foot	Red Bandana	Loud Whistles
Mia	Metal Detector	Signal Flare	Taps Right Foot	Green Bandana	Bright Lights
Noah	Smoke Bomb	Mini Paraglider	Taps Left Foot	Green Bandana	Loud Whistles
Harper	Smoke Bomb	Solar Lantern	Taps Left Foot	Red Bandana	Loud Whistles
Ben	Machete	Recon Drone	Taps Right Foot	Red Bandana	Bright Lights
Sofia	Climbing Gear	Pocket Compass	Taps Left Foot	Blue Bandana	Bee Swarms
Emma	Grappling Hook	Solar Lantern	Taps Right Foot	Blue Bandana	Loud Whistles
Ava	Smoke Bomb	Recon Drone	Taps Right Foot	Red Bandana	Loud Whistles
Layla	Climbing Gear	Signal Flare	Taps Left Foot	Blue Bandana	Loud Whistles
Sam	Grappling Hook	Solar Lantern	Taps Left Foot	Red Bandana	Loud Whistles
Alex	Grappling Hook	Pocket Compass	Taps Right Foot	Red Bandana	Loud Whistles
Oliver	Climbing Gear	Solar Lantern	Taps Right Foot	Green Bandana	Bee Swarms
Mason	Grappling Hook	Solar Lantern	Taps Right Foot	Red Bandana	Bright Lights
James	Grappling Hook	Recon Drone	Taps Right Foot	Red Bandana	Loud Whistles
Ethan	Smoke Bomb	Mini Paraglider	Taps Right Foot	Blue Bandana	Bee Swarms
Zara	Climbing Gear	Pocket Compass	Taps Left Foot	Blue Bandana	Bright Lights
Liam	Grappling Hook	Signal Flare	Taps Right Foot	Red Bandana	Loud Whistles

CLUE 1 Percentages

We calculated the percentage of energy remaining in the vault power grid.

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

T																T
7	27	9	29	11	30	30	24	11	36	16	28	9	44	36	28	7
10	44	9	24	44	11	20	36	24	30	26	30	24	6	9		

$25\% \text{ of } 28 = \boxed{} \rightarrow \boxed{\text{T}}$

$20\% \text{ of } 100 = \boxed{} \rightarrow \boxed{\text{G}}$

$75\% \text{ of } 8 = \boxed{} \rightarrow \boxed{\text{R}}$

$5\% \text{ of } 580 = \boxed{} \rightarrow \boxed{\text{V}}$

$50\% \text{ of } 60 = \boxed{} \rightarrow \boxed{\text{L}}$

$5\% \text{ of } 180 = \boxed{} \rightarrow \boxed{\text{E}}$

$10\% \text{ of } 260 = \boxed{} \rightarrow \boxed{\text{F}}$

$20\% \text{ of } 180 = \boxed{} \rightarrow \boxed{\text{N}}$

$60\% \text{ of } 40 = \boxed{} \rightarrow \boxed{\text{A}}$

$25\% \text{ of } 112 = \boxed{} \rightarrow \boxed{\text{O}}$

$50\% \text{ of } 22 = \boxed{} \rightarrow \boxed{\text{I}}$

$40\% \text{ of } 25 = \boxed{} \rightarrow \boxed{\text{U}}$

$40\% \text{ of } 110 = \boxed{} \rightarrow \boxed{\text{S}}$

$50\% \text{ of } 32 = \boxed{} \rightarrow \boxed{\text{D}}$

$75\% \text{ of } 36 = \boxed{} \rightarrow \boxed{\text{H}}$

Scratch space:

CLUE 2 Exponents

We measured the exponential surge in frequency on the temple radio receiver.

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

W									W							
289	27	4	100	225	49	49	49	32	289	144	216	216	4			
4	32	128	128	27	100	9	216	100	4	25	225	121	27	9	25	4
49	27	81	225													

$17^2 = \square \rightarrow$ W	$2^5 = \square \rightarrow$ A	$15^2 = \square \rightarrow$ E	$7^2 = \square \rightarrow$ S
$2^2 = \square \rightarrow$ T	$12^2 = \square \rightarrow$ F	$5^2 = \square \rightarrow$ H	$3^2 = \square \rightarrow$ G
$3^4 = \square \rightarrow$ D	$6^3 = \square \rightarrow$ O	$11^2 = \square \rightarrow$ R	$3^3 = \square \rightarrow$ I
$10^2 = \square \rightarrow$ N	$2^7 = \square \rightarrow$ P		

Scratch space:

CLUE 3
Order of operations

We solved the multi step trap lock sequence using order of operations.

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

D					D						D				D			
32	67	79	67	30	32	67	52	31	15	67	32	41	34	31	32			
										D								
13	73	42	15	22	41	67	15	22	34	32	52	42	71	67	22	73	67	57
34	79	79																

$26 + 2 \times 3 =$ $\rightarrow$ D	$6 \times 9 - 24 =$ $\rightarrow$ N	$12 \times 8 - 29 =$ $\rightarrow$ E
$22 + 3 \times 3 =$ $\rightarrow$ U	$4 \times 10 - 6 =$ $\rightarrow$ O	$5 + 5 \times 2 =$ $\rightarrow$ S
$10 \times 8 - 28 =$ $\rightarrow$ R	$12 \times 7 - 11 =$ $\rightarrow$ H	$55 + 6 \times 4 =$ $\rightarrow$ F
$5 \times 9 - 23 =$ $\rightarrow$ T	$6 \times 10 - 18 =$ $\rightarrow$ I	$11 \times 7 - 20 =$ $\rightarrow$ M
$4 \times 11 - 3 =$ $\rightarrow$ L	$11 \times 8 - 17 =$ $\rightarrow$ V	$1 + 6 \times 2 =$ $\rightarrow$ W

Scratch space:

CLUE 4
Multiplication facts (1-12)

We multiplied the rows of carved stone floor tiles to count total steps.

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

R												R				
36	84	120	30	32	108	120	32	108	32	64	42	36	84	32	120	100
2	84	45	64	32	64	64	84	12	27	2	84	9	32	64	84	

$6 \times 6 = \square \rightarrow \text{R}$

$4 \times 8 = \square \rightarrow \text{A}$

$8 \times 8 = \square \rightarrow \text{T}$

$3 \times 3 = \square \rightarrow \text{G}$

$12 \times 9 = \square \rightarrow \text{N}$

$2 \times 6 = \square \rightarrow \text{M}$

$7 \times 6 = \square \rightarrow \text{H}$

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

$9 \times 5 = \square \rightarrow \text{F}$

$6 \times 5 = \square \rightarrow \text{B}$

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

$7 \times 12 = \square \rightarrow \text{E}$

$9 \times 3 = \square \rightarrow \text{P}$

$10 \times 12 = \square \rightarrow \text{D}$

Scratch space:

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

We divided the rescue supplies equally among all members at base camp.

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:

$48 \div 4 = \boxed{}$

$15 \div 5 = \boxed{}$

$32 \div 8 = \boxed{}$

$35 \div 7 = \boxed{}$

$12 \div 12 = \boxed{}$

$80 \div 8 = \boxed{}$

$21 \div 3 = \boxed{}$

$88 \div 11 = \boxed{}$

$42 \div 7 = \boxed{}$

$54 \div 6 = \boxed{}$

$121 \div 11 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain decoded the golden sun disk, then pocketed the emerald beetle.
2. The villain triggered the ancient dart trap, then snatched the crystal skull.
3. The villain swung across the perilous chasm, then snatched the crystal skull.
4. The villain scaled the overgrown stone tower, then snatched the crystal skull.
5. The villain swung across the perilous chasm, then pocketed the emerald beetle.
6. The villain decoded the golden sun disk, then grabbed the ruby idol.
7. The villain decoded the golden sun disk, then nabbed the golden compass.
8. The villain decoded the golden sun disk, then swiped the ancient map scroll.
9. The villain triggered the ancient dart trap, then grabbed the ruby idol.
10. The villain hacked the temple gate controls, then swiped the ancient map scroll.
11. The villain triggered the ancient dart trap, then swiped the ancient map scroll.
12. The villain swung across the perilous chasm, then nabbed the golden compass.

Answer Key

Mystery of the Sunken Sun Temple

Culprit: Ava

Smoke Bomb · Recon Drone · Taps Right Foot · Red Bandana · Loud Whistles

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Percentages): "THE VILLAIN DOES NOT USE A SIGNAL FLARE"

25% of 28 = 7 (T) · 20% of 100 = 20 (G) · 75% of 8 = 6 (R) · 5% of 580 = 29 (V) · 50% of 60 = 30 (L) · 5% of 180 = 9 (E) · 10% of 260 = 26 (F) · 20% of 180 = 36 (N) · 60% of 40 = 24 (A) · 25% of 112 = 28 (O) · 50% of 22 = 11 (I) · 40% of 25 = 10 (U) · 40% of 110 = 44 (S) · 50% of 32 = 16 (D) · 75% of 36 = 27 (H)

Clue 2 (Exponents): "WITNESS SAW FOOT TAPPING ON THE RIGHT SIDE"

$17^2 = 289$ (W) · $2^5 = 32$ (A) · $15^2 = 225$ (E) · $7^2 = 49$ (S) · $2^2 = 4$ (T) · $12^2 = 144$ (F) · $5^2 = 25$ (H) · $3^2 = 9$ (G) · $3^4 = 81$ (D) · $6^3 = 216$ (O) · $11^2 = 121$ (R) · $3^3 = 27$ (I) · $10^2 = 100$ (N) · $2^7 = 128$ (P)

Clue 3 (Order of operations): "DEFENDER USED LOUD WHISTLES TO DRIVE THEM OFF"

$26 + 2 \times 3 = 32$ (D) · $6 \times 9 - 24 = 30$ (N) · $12 \times 8 - 29 = 67$ (E) · $22 + 3 \times 3 = 31$ (U) · $4 \times 10 - 6 = 34$ (O) · $5 + 5 \times 2 = 15$ (S) · $10 \times 8 - 28 = 52$ (R) · $12 \times 7 - 11 = 73$ (H) · $55 + 6 \times 4 = 79$ (F) · $5 \times 9 - 23 = 22$ (T) · $6 \times 10 - 18 = 42$ (I) · $11 \times 7 - 20 = 57$ (M) · $4 \times 11 - 3 = 41$ (L) · $11 \times 8 - 17 = 71$ (V) · $1 + 6 \times 2 = 13$ (W)

Clue 4 (Multiplication facts (1-12)): "RED BANDANA THREADS LEFT AT TEMPLE GATE"

$6 \times 6 = 36$ (R) · $4 \times 8 = 32$ (A) · $8 \times 8 = 64$ (T) · $3 \times 3 = 9$ (G) · $12 \times 9 = 108$ (N) · $2 \times 6 = 12$ (M) · $7 \times 6 = 42$ (H) · $2 \times 1 = 2$ (L) · $9 \times 5 = 45$ (F) · $6 \times 5 = 30$ (B) · $10 \times 10 = 100$ (S) · $7 \times 12 = 84$ (E) · $9 \times 3 = 27$ (P) · $10 \times 12 = 120$ (D)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Ava

$48 \div 4 = 12$ · $15 \div 5 = 3$ · $32 \div 8 = 4$ · $35 \div 7 = 5$ · $12 \div 12 = 1$ · $80 \div 8 = 10$ · $21 \div 3 = 7$ · $88 \div 11 = 8$ · $42 \div 7 = 6$ · $54 \div 6 = 9$ · $121 \div 11 = 11$