



The Temple of the Gilded Jaguar

Grade 7 math · Integers, Percentages, Order of operations, Exponents, Two-step equations · Reading level grades 7-9

Detective: _____ **Date:** _____

The golden Sun-Disk has vanished from the base camp at the Temple of the Gilded Jaguar, and the chief archaeologist has been locked inside the supply vault. It is up to you to track down the thief 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 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	GEAR CHOICE	STOLEN RELIC	COMPASS STYLE	HAIR DESCRIPTION	AVOIDED AREA
Ibn Battuta	sharp machete	jade compass	left handed compass	dark braided hair	high ledges
Sally Ride	sharp machete	bronze whistle	left handed compass	bright red hair	high ledges
James Cook	heavy headlamp	gold medallion	left handed compass	bright red hair	high ledges
Indiana Jones	climbing harness	jade compass	right handed compass	sandy blonde hair	creepy spiders
Nellie Bly	brass binoculars	gold medallion	right handed compass	bright red hair	high ledges
Jane Goodall	climbing harness	jade compass	left handed compass	bright red hair	high ledges
Hiram Bingham	brass binoculars	crystal prism	left handed compass	sandy blonde hair	high ledges
Alexander Humboldt	climbing harness	jade compass	right handed compass	dark braided hair	deep water
Gertrude Bell	brass binoculars	crystal prism	left handed compass	bright red hair	deep water
Mary Anning	sharp machete	obsidian scarab	left handed compass	bright red hair	high ledges
Roald Amundsen	climbing harness	crystal prism	left handed compass	dark braided hair	high ledges
Amelia Earhart	sharp machete	crystal prism	left handed compass	sandy blonde hair	creepy spiders
Jacques Cousteau	sharp machete	bronze whistle	right handed compass	sandy blonde hair	high ledges
Sylvia Earle	heavy headlamp	bronze whistle	left handed compass	bright red hair	high ledges
Matthew Henson	sharp machete	crystal prism	left handed compass	bright red hair	high ledges
Steve Irwin	sharp machete	gold medallion	left handed compass	dark braided hair	creepy spiders
Charles Darwin	shortwave radio	obsidian scarab	left handed compass	sandy blonde hair	creepy spiders
Sacagawea	climbing harness	jade compass	left handed compass	sandy blonde hair	creepy spiders
Isabella Bird	brass binoculars	bronze whistle	left handed compass	bright red hair	high ledges
Percy Fawcett	brass binoculars	jade compass	left handed compass	sandy blonde hair	high ledges
Marco Polo	heavy headlamp	gold medallion	left handed compass	dark braided hair	high ledges

CLUE 1 Integers

To decode the suspect's elevation trail, you must calculate the net change from a series of drops and climbs in the deep subterranean shafts.

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

T																T
26	19	21	13	12	24	24	18	12	20	22	1	21	9	20	1	26
			T												T	
1	23	20	26	19	21	5	17	1	20	29	21	23	19	12	9	26

$21 - (-5) = \square \rightarrow \text{T}$	$16 - (-1) = \square \rightarrow \text{R}$	$(-4) + 5 = \square \rightarrow \text{O}$
$(-5) + 28 = \square \rightarrow \text{W}$	$(-2) + 22 = \square \rightarrow \text{N}$	$18 - (-6) = \square \rightarrow \text{L}$
$11 - (-8) = \square \rightarrow \text{H}$	$1 - (-4) = \square \rightarrow \text{B}$	$(-2) + 14 = \square \rightarrow \text{I}$
$(-1) + 22 = \square \rightarrow \text{E}$	$4 - (-5) = \square \rightarrow \text{S}$	$(-11) + 40 = \square \rightarrow \text{Z}$
$(-7) + 25 = \square \rightarrow \text{A}$	$(-12) + 34 = \square \rightarrow \text{D}$	$(-14) + 27 = \square \rightarrow \text{V}$

Scratch space:

CLUE 2 Percentages

The temple's ancient sun-lock requires you to determine exactly what percentage of the light-beams must be aligned to trigger the door.

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

T										T									
9	27	18	28	33	28	40	18	29	9	55	4	57	40	40	18	55			13
			T																
41	18	59	9	27	13	1	55	18	55	29	57	45	40	13	28	28			

$20\% \text{ of } 45 = \square \rightarrow \boxed{\text{T}}$

$40\% \text{ of } 70 = \square \rightarrow \boxed{\text{S}}$

$50\% \text{ of } 110 = \square \rightarrow \boxed{\text{D}}$

$60\% \text{ of } 95 = \square \rightarrow \boxed{\text{O}}$

$60\% \text{ of } 75 = \square \rightarrow \boxed{\text{M}}$

$25\% \text{ of } 4 = \square \rightarrow \boxed{\text{N}}$

$5\% \text{ of } 820 = \square \rightarrow \boxed{\text{L}}$

$20\% \text{ of } 65 = \square \rightarrow \boxed{\text{A}}$

$25\% \text{ of } 108 = \square \rightarrow \boxed{\text{H}}$

$25\% \text{ of } 236 = \square \rightarrow \boxed{\text{F}}$

$10\% \text{ of } 180 = \square \rightarrow \boxed{\text{E}}$

$50\% \text{ of } 58 = \square \rightarrow \boxed{\text{C}}$

$25\% \text{ of } 160 = \square \rightarrow \boxed{\text{P}}$

$5\% \text{ of } 80 = \square \rightarrow \boxed{\text{R}}$

$75\% \text{ of } 44 = \square \rightarrow \boxed{\text{U}}$

Scratch space:

Order of operations

A complex series of stone gears operates the drawbridge. Calculate their rotations in the correct order to lower the platform.

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

Diagram showing two rows of boxes with numbers and 'T' markers.

Top row (18 boxes):

- Box 1: T (orange)
- Box 2: 86
- Box 3: 100
- Box 4: 88
- Box 5: 76
- Box 6: 106
- Box 7: 106
- Box 8: 43
- Box 9: 76
- Box 10: 10
- Box 11: 43
- Box 12: 88
- Box 13: 109
- Box 14: 76
- Box 15: 83
- Box 16: 100
- Box 17: T (orange)
- Box 18: 100

Bottom row (10 boxes):

- Box 1: 86
- Box 2: 76
- Box 3: 23
- Box 4: 86
- Box 5: 67
- Box 6: 106
- Box 7: 76
- Box 8: 47
- Box 9: 47

$$87 + 3 \times 9 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$64 + 9 \times 5 = \boxed{} \rightarrow \boxed{0}$$

$$9 \times 12 - 22 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4 \times 7 - 5 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$70 + 6 \times 3 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$52 + 5 \times 3 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$2 + 4 \times 2 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$7 \times 8 - 13 = \boxed{} \rightarrow \boxed{\text{A}}$$

$10 \times 10 - 17 = \boxed{} \rightarrow \mathbf{D}$

$19 + 4 \times 7 = \boxed{} \rightarrow \boxed{\text{F}}$

$$11 \times 10 - 4 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$73 + 9 \times 3 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$52 + 8 \times 3 = \boxed{} \rightarrow \boxed{\text{I}}$$

Scratch space:

CLUE 4 Exponents

The security chamber uses a grid pattern where the traps scale exponentially. Solve the base and exponent puzzle to find the safe path.

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

W															
4	216	64	400	128	196	361	49	243	27	9	225	16	243	216	361

225	125	27	243	125	16	16	225	216	36	343	216	196	216

$2^2 = \square \rightarrow \mathbf{W}$	$6^2 = \square \rightarrow \mathbf{S}$	$4^3 = \square \rightarrow \mathbf{F}$	$15^2 = \square \rightarrow \mathbf{H}$
$4^2 = \square \rightarrow \mathbf{T}$	$5^3 = \square \rightarrow \mathbf{A}$	$3^2 = \square \rightarrow \mathbf{G}$	$7^3 = \square \rightarrow \mathbf{C}$
$14^2 = \square \rightarrow \mathbf{N}$	$19^2 = \square \rightarrow \mathbf{D}$	$6^3 = \square \rightarrow \mathbf{E}$	$20^2 = \square \rightarrow \mathbf{O}$
$3^5 = \square \rightarrow \mathbf{R}$	$2^7 = \square \rightarrow \mathbf{U}$	$7^2 = \square \rightarrow \mathbf{B}$	$3^3 = \square \rightarrow \mathbf{I}$

Scratch space:

CLUE 5**Two-step equations - the last clue**

You find a heavy scale balanced with basalt blocks. Solve the two-step algebraic riddle of the weights to unlock the final room.

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:

$6x + 4 = 70, x = \boxed{}$

$6x + 4 = 76, x = \boxed{}$

$4x + 11 = 43, x = \boxed{}$

$6x + 12 = 72, x = \boxed{}$

$3x + 10 = 31, x = \boxed{}$

$2x + 11 = 29, x = \boxed{}$

$3x + 6 = 18, x = \boxed{}$

$2x + 11 = 15, x = \boxed{}$

$3x + 9 = 12, x = \boxed{}$

$5x + 5 = 20, x = \boxed{}$

$2x + 7 = 19, x = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain lights up the dark tunnel with a heavy headlamp, then snatches the shining crystal prism.
2. The villain scouts the ruins with brass binoculars, then swipes the obsidian scarab relic.
3. The villain uses a climbing harness to scale the temple wall, then grabs the noisy bronze whistle.
4. The villain clears path brush with a sharp machete, then pockets the priceless gold medallion.
5. The villain clears path brush with a sharp machete, then swipes the obsidian scarab relic.
6. The villain scouts the ruins with brass binoculars, then pockets the priceless gold medallion.
7. The villain clears path brush with a sharp machete, then grabs the noisy bronze whistle.
8. The villain uses a climbing harness to scale the temple wall, then steals the ancient jade compass.
9. The villain uses a climbing harness to scale the temple wall, then swipes the obsidian scarab relic.
10. The villain scouts the ruins with brass binoculars, then grabs the noisy bronze whistle.
11. The villain clears path brush with a sharp machete, then snatches the shining crystal prism.
12. The villain lights up the dark tunnel with a heavy headlamp, then pockets the priceless gold medallion.

Answer Key

The Temple of the Gilded Jaguar

Culprit: Mary Anning

sharp machete · obsidian scarab · left handed compass · bright red hair · high ledges

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Integers): "THE VILLAIN DOES NOT OWN THE BRONZE WHISTLE"

$21 - (-5) = 26$ (T) · $16 - (-1) = 17$ (R) · $(-4) + 5 = 1$ (O) · $(-5) + 28 = 23$ (W) · $(-2) + 22 = 20$ (N) · $18 - (-6) = 24$ (L) · $11 - (-8) = 19$ (H) · $1 - (-4) = 5$ (B) · $(-2) + 14 = 12$ (I) · $(-1) + 22 = 21$ (E) · $4 - (-5) = 9$ (S) · $(-11) + 40 = 29$ (Z) · $(-7) + 25 = 18$ (A) · $(-12) + 34 = 22$ (D) · $(-14) + 27 = 13$ (V)

Clue 2 (Percentages): "THE SUSPECT DROPPED A LEFT HANDED COMPASS"

20% of 45 = 9 (T) · 40% of 70 = 28 (S) · 50% of 110 = 55 (D) · 60% of 95 = 57 (O) · 60% of 75 = 45 (M) · 25% of 4 = 1 (N) · 5% of 820 = 41 (L) · 20% of 65 = 13 (A) · 25% of 108 = 27 (H) · 25% of 236 = 59 (F) · 10% of 180 = 18 (E) · 50% of 58 = 29 (C) · 25% of 160 = 40 (P) · 5% of 80 = 4 (R) · 75% of 44 = 33 (U)

Clue 3 (Order of operations): "THE VILLAIN AVOIDED THE HIGH CLIFF"

$87 + 3 \times 9 = 114$ (T) · $64 + 9 \times 5 = 109$ (O) · $9 \times 12 - 22 = 86$ (H) · $4 \times 7 - 5 = 23$ (G) · $70 + 6 \times 3 = 88$ (V) · $52 + 5 \times 3 = 67$ (C) · $2 + 4 \times 2 = 10$ (N) · $7 \times 8 - 13 = 43$ (A) · $10 \times 10 - 17 = 83$ (D) · $19 + 4 \times 7 = 47$ (F) · $11 \times 10 - 4 = 106$ (L) · $73 + 9 \times 3 = 100$ (E) · $52 + 8 \times 3 = 76$ (I)

Clue 4 (Exponents): "WE FOUND BRIGHT RED HAIR AT THE SCENE"

$2^2 = 4$ (W) · $6^2 = 36$ (S) · $4^3 = 64$ (F) · $15^2 = 225$ (H) · $4^2 = 16$ (T) · $5^3 = 125$ (A) · $3^2 = 9$ (G) · $7^3 = 343$ (C) · $14^2 = 196$ (N) · $19^2 = 361$ (D) · $6^3 = 216$ (E) · $20^2 = 400$ (O) · $3^5 = 243$ (R) · $2^7 = 128$ (U) · $7^2 = 49$ (B) · $3^3 = 27$ (I)

Clue 5 (Two-step equations): surviving statement is box 5 → Mary Anning

$6x + 4 = 70, x = 11$ · $6x + 4 = 76, x = 12$ · $4x + 11 = 43, x = 8$ · $6x + 12 = 72, x = 10$ · $3x + 10 = 31, x = 7$ · $2x + 11 = 29, x = 9$ · $3x + 6 = 18, x = 4$ · $2x + 11 = 15, x = 2$ · $3x + 9 = 12, x = 1$ · $5x + 5 = 20, x = 3$ · $2x + 7 = 19, x = 6$