



The Mystery of the Whispering Ruins

Grade 4 math · Subtraction, Rounding, Addition, Multiplication, Division · Reading level grades 3-4

Detective: _____ Date: _____

Someone snuck into the expedition tent at midnight and snatched the ancient golden compass! Match the clues to find out who stole the artifact.

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 Jungle Phantom is _____

Possible suspects

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

NAME	PRIMARY GEAR	SPECIAL GADGET	DOMINANT HAND	HAIR STYLE	VULNERABILITY
Ivy	Smoke Bomb	Sonic Whistle	Left Handed	Blonde Messy Hair	Bright Light
Ruby	Glider Wings	Sonic Whistle	Left Handed	Blonde Messy Hair	Bright Light
Lily	Smoke Bomb	Flash Flare	Right Handed	Blonde Messy Hair	Bright Light
Cole	Compass Map	Flash Flare	Left Handed	Black Ponytail	Bright Light
Owen	Torch Lantern	Flash Flare	Left Handed	Black Ponytail	Loud Whistle
Finn	Grappling Hook	Decoy Whistle	Left Handed	Black Ponytail	Loud Whistle
Maya	Torch Lantern	Decoy Whistle	Left Handed	Red Braids	Cold Water
Zoe	Grappling Hook	Sonic Whistle	Left Handed	Blonde Messy Hair	Cold Water
Nora	Compass Map	Decoy Whistle	Left Handed	Red Braids	Bright Light
Eva	Compass Map	Radar Tracker	Left Handed	Blonde Messy Hair	Bright Light
Luke	Smoke Bomb	Sonic Whistle	Right Handed	Black Ponytail	Bright Light
Mia	Compass Map	Flash Flare	Right Handed	Red Braids	Loud Whistle
Mason	Compass Map	Sonic Whistle	Left Handed	Blonde Messy Hair	Loud Whistle
Ella	Torch Lantern	Sonic Whistle	Left Handed	Black Ponytail	Cold Water
Zara	Compass Map	Sonic Whistle	Right Handed	Red Braids	Bright Light
Sam	Smoke Bomb	Decoy Whistle	Left Handed	Red Braids	Bright Light
Kai	Torch Lantern	Sonic Whistle	Left Handed	Blonde Messy Hair	Bright Light
Noah	Torch Lantern	Decoy Whistle	Left Handed	Blonde Messy Hair	Bright Light
Leo	Torch Lantern	Flash Flare	Right Handed	Red Braids	Cold Water
Max	Smoke Bomb	Sonic Whistle	Right Handed	Black Ponytail	Loud Whistle
Aria	Torch Lantern	Night Vision	Left Handed	Black Ponytail	Bright Light

Subtraction

You calculate how many supplies are left in the camp pack after the intruder escaped.

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

Diagram illustrating a sequence of numbers and positions:

Top Row (16 positions):

- Position 1: T
- Position 2: 1608
- Position 3: 1822
- Position 4: 7883
- Position 5: 7756
- Position 6: 4144
- Position 7: 6348
- Position 8: 6348
- Position 9: 7669
- Position 10: 4144
- Position 11: 5027
- Position 12: 2886
- Position 13: 6039
- Position 14: 7883
- Position 15: 2038
- Position 16: 5027
- Position 17: 6039
- Position 18: T
- Position 19: 1608

Bottom Row (12 positions):

- Position 1: 5750
- Position 2: 2038
- Position 3: 7883
- Position 4: 7995
- Position 5: 7669
- Position 6: 2886
- Position 7: 7669
- Position 8: 7995
- Position 9: T
- Position 10: 1608
- Position 11: 7995
- Position 12: 7669
- Position 13: 4954
- Position 14: 4816
- Position 15: 7883
- Position 16: 7995

$$5133 - 3525 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$8181 - 4037 = \boxed{} \rightarrow \boxed{\text{I}}$$

9179 - 4363 = → **K**

$$6039 - 4217 = \boxed{} \rightarrow \boxed{\text{H}}$$

9245 - 1576 = → **A**

$9495 - 3147 = \boxed{} \rightarrow \boxed{\text{L}}$

$$9134 - 1378 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$5278 - 324 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$12875 - 4992 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$3893 - 1007 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$8546 - 2507 = \boxed{} \rightarrow \boxed{0}$$

$$9526 - 1531 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$8457 - 3430 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$8550 - 2800 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$3986 - 1948 = \boxed{} \rightarrow \boxed{\text{S}}$$

Scratch space:

CLUE 2

Rounding

The digital camp scanner rounds the total footprint readings to the nearest hundred.

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

W									W										
20	170	1100	2300	430	1700	1700	1700	5000	20	130	430	370	1100	110	5000	2300	300	430	300

1100	700	5000	70	3000	1700

Round 16 to the nearest ten → **W**

Round 428 to the nearest ten → **E**

Round 728 to the nearest hundred → **R**

Round 373 to the nearest ten → **F**

Round 1,117 to the nearest hundred → **T**

Round 74 to the nearest ten → **C**

Round 2,303 to the nearest hundred → **N**

Round 132 to the nearest ten → **L**

Round 2,651 to the nearest thousand → **K**

Round 4,599 to the nearest thousand → **A**

Round 168 to the nearest ten → **I**

Round 315 to the nearest hundred → **D**

Round 109 to the nearest ten → **H**

Round 1,660 to the nearest hundred → **S**

Scratch space:

CLUE 3 Addition

You add up all the missing golden coins found along the jungle trail.

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

9162 5844 8194 5911 7313 7313 5911 6692 8957 2482 6651 6017 2482 4762 6692 5980 5980

7877 6447 6651 6017 6325 5911 6447 9162 6017 6651 5143 6447 9162 6017 6651

$$4706 + 4456 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$4297 + 2354 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$1903 + 4008 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$1960 + 4057 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$1847 + 2915 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$3774 + 2070 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$2125 + 3855 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$4698 + 3179 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$4667 + 4290 = \boxed{} \rightarrow \boxed{\text{V}}$$

$$3582 + 4612 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$4521 + 2171 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$4320 + 2993 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$2279 + 2864 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$4177 + 2270 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$2408 + 3917 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$1164 + 1318 = \boxed{} \rightarrow \boxed{\text{E}}$$

Scratch space:

CLUE 4
Multiplication facts (1-12)

You count the rows of ancient stone tiles leading to the inner temple chamber.

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

B																
44	14	96	24	32	9	132	70	121	12	28	96	35	24	32	96	24

42	9	24	42	30	121	90	90	9	12

$4 \times 11 = \square \rightarrow \text{B}$

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

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

$5 \times 7 = \square \rightarrow \text{U}$

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

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

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

$12 \times 11 = \square \rightarrow \text{H}$

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

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

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

$7 \times 4 = \square \rightarrow \text{F}$

$12 \times 2 = \square \rightarrow \text{N}$

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

$10 \times 7 = \square \rightarrow \text{A}$

Scratch space:

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

You split the recovered map scraps equally among the junior explorer teams.

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:

$70 \div 10 = \boxed{}$

$6 \div 2 = \boxed{}$

$4 \div 2 = \boxed{}$

$30 \div 5 = \boxed{}$

$100 \div 10 = \boxed{}$

$36 \div 3 = \boxed{}$

$32 \div 4 = \boxed{}$

$63 \div 7 = \boxed{}$

$10 \div 2 = \boxed{}$

$16 \div 4 = \boxed{}$

$3 \div 3 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain soared over the treetops on glider wings, then fooled the guards using a decoy whistle.
2. The villain soared over the treetops on glider wings, then called trained parrots with a sonic whistle.
3. The villain vanished in a cloud using a smoke bomb, then called trained parrots with a sonic whistle.
4. The villain navigated the maze using a compass map, then scouted ahead using night vision.
5. The villain swung across the chasm with a grappling hook, then called trained parrots with a sonic whistle.
6. The villain lit up the dark cavern with a torch lantern, then monitored the ruins with a radar tracker.
7. The villain lit up the dark cavern with a torch lantern, then called trained parrots with a sonic whistle.
8. The villain navigated the maze using a compass map, then called trained parrots with a sonic whistle.
9. The villain swung across the chasm with a grappling hook, then scouted ahead using night vision.
10. The villain vanished in a cloud using a smoke bomb, then scouted ahead using night vision.
11. The villain lit up the dark cavern with a torch lantern, then fooled the guards using a decoy whistle.
12. The villain soared over the treetops on glider wings, then monitored the ruins with a radar tracker.

Answer Key

The Mystery of the Whispering Ruins

Culprit: Noah

Torch Lantern · Decoy Whistle · Left Handed · Blonde Messy Hair · Bright Light

Trail: Start 21 → Clue 1 20 → Clue 2 14 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Subtraction): "THE VILLAIN DOES NOT USE RADAR TRACKER"

$5133 - 3525 = 1608$ (T) · $8181 - 4037 = 4144$ (I) · $9179 - 4363 = 4816$ (K) · $6039 - 4217 = 1822$ (H) · $9245 - 1576 = 7669$ (A) · $9495 - 3147 = 6348$ (L) · $9134 - 1378 = 7756$ (V) · $5278 - 324 = 4954$ (C) · $12875 - 4992 = 7883$ (E) · $3893 - 1007 = 2886$ (D) · $8546 - 2507 = 6039$ (O) · $9526 - 1531 = 7995$ (R) · $8457 - 3430 = 5027$ (N) · $8550 - 2800 = 5750$ (U) · $3986 - 1948 = 2038$ (S)

Clue 2 (Rounding): "WITNESS SAW LEFT HANDED TRACKS"

Round 16 to the nearest ten = 20 (W) · Round 428 to the nearest ten = 430 (E) · Round 728 to the nearest hundred = 700 (R) · Round 373 to the nearest ten = 370 (F) · Round 1,117 to the nearest hundred = 1100 (T) · Round 74 to the nearest ten = 70 (C) · Round 2,303 to the nearest hundred = 2300 (N) · Round 132 to the nearest ten = 130 (L) · Round 2,651 to the nearest thousand = 3000 (K) · Round 4,599 to the nearest thousand = 5000 (A) · Round 168 to the nearest ten = 170 (I) · Round 315 to the nearest hundred = 300 (D) · Round 109 to the nearest ten = 110 (H) · Round 1,660 to the nearest hundred = 1700 (S)

Clue 3 (Addition): "GUARD DROVE THEM OFF WITH BRIGHT LIGHT"

$4706 + 4456 = 9162$ (G) · $4297 + 2354 = 6651$ (T) · $1903 + 4008 = 5911$ (R) · $1960 + 4057 = 6017$ (H) · $1847 + 2915 = 4762$ (M) · $3774 + 2070 = 5844$ (U) · $2125 + 3855 = 5980$ (F) · $4698 + 3179 = 7877$ (W) · $4667 + 4290 = 8957$ (V) · $3582 + 4612 = 8194$ (A) · $4521 + 2171 = 6692$ (O) · $4320 + 2993 = 7313$ (D) · $2279 + 2864 = 5143$ (L) · $4177 + 2270 = 6447$ (I) · $2408 + 3917 = 6325$ (B) · $1164 + 1318 = 2482$ (E)

Clue 4 (Multiplication facts (1-12)): "BLONDE HAIR FOUND ON TENT ZIPPER"

$4 \times 11 = 44$ (B) · $7 \times 2 = 14$ (L) · $3 \times 3 = 9$ (E) · $5 \times 7 = 35$ (U) · $6 \times 5 = 30$ (Z) · $8 \times 12 = 96$ (O) · $7 \times 6 = 42$ (T) · $12 \times 11 = 132$ (H) · $4 \times 8 = 32$ (D) · $4 \times 3 = 12$ (R) · $9 \times 10 = 90$ (P) · $7 \times 4 = 28$ (F) · $12 \times 2 = 24$ (N) · $11 \times 11 = 121$ (I) · $10 \times 7 = 70$ (A)

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

$70 \div 10 = 7$ · $6 \div 2 = 3$ · $4 \div 2 = 2$ · $30 \div 5 = 6$ · $100 \div 10 = 10$ · $36 \div 3 = 12$ · $32 \div 4 = 8$ · $63 \div 7 = 9$ · $10 \div 2 = 5$ · $16 \div 4 = 4$ · $3 \div 3 = 1$