The Mystery of the Sunken Temple

Grade 7 math · Rounding, Word problems, Integers, Percentages, Missing addends · Reading level grades 7-9

Detective: _____ **Date:** _____

During a midnight storm, an elusive intruder broke into the central vault of the Sunken Temple of Zun and snatched the legendary Crystal Idol. Lead Archaeologist Dr. Vance needs your help to examine the evidence and unmask the rogue explorer 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 Shadow Raider 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	SECONDARY TOOL	DOMINANT HAND	HAIRSTYLE	EXPLOITABLE WEAKNESS
Talia Al Mansoor	Sonic Whistle	Compass	Left Handed	Braided Ponytail	Bright Flashlights
Hugo Mercer	Sonic Whistle	Decoder Ring	Left Handed	Braided Ponytail	Bright Flashlights
Chloe Bennet	Grappling Hook	Climbing Pitons	Right Handed	Braided Ponytail	Squeaking Toys
Kai Tanaka	Sonic Whistle	Machete	Left Handed	Braided Ponytail	Squeaking Toys
Freya Lind	Grappling Hook	Compass	Right Handed	Curly Topknot	Squeaking Toys
Lara Finch	Grappling Hook	Signal Flare	Left Handed	Braided Ponytail	Bright Flashlights
Nora Vance	Smoke Bombs	Decoder Ring	Left Handed	Braided Ponytail	Bright Flashlights
Leo Cruz	Flash Torch	Compass	Right Handed	Braided Ponytail	Bright Flashlights
Captain Harlow	Sonic Whistle	Decoder Ring	Right Handed	Braided Ponytail	Squeaking Toys
Maya Rivers	Sonic Whistle	Climbing Pitons	Right Handed	Braided Ponytail	Loud Whistles
Felix Thorne	Glider Suit	Climbing Pitons	Right Handed	Spiky Crewcut	Squeaking Toys
Sienna Stone	Grappling Hook	Machete	Left Handed	Curly Topknot	Squeaking Toys
Professor Quigley	Glider Suit	Machete	Right Handed	Spiky Crewcut	Bright Flashlights
Aria Delgado	Smoke Bombs	Climbing Pitons	Right Handed	Braided Ponytail	Squeaking Toys
Gideon Pike	Flash Torch	Compass	Right Handed	Spiky Crewcut	Loud Whistles
Elena Rostova	Sonic Whistle	Signal Flare	Right Handed	Curly Topknot	Loud Whistles
Indiana Drake	Glider Suit	Signal Flare	Right Handed	Braided Ponytail	Squeaking Toys
Dr Marcus Vance	Sonic Whistle	Climbing Pitons	Left Handed	Spiky Crewcut	Loud Whistles
Dante Brooks	Grappling Hook	Signal Flare	Right Handed	Spiky Crewcut	Squeaking Toys
Jasper Cole	Flash Torch	Compass	Left Handed	Spiky Crewcut	Squeaking Toys
Samira Khan	Flash Torch	Signal Flare	Right Handed	Braided Ponytail	Squeaking Toys

make your own at mathcrackers.com

CLUE 1 Rounding

> To map out the intruder escape path through the temple corridors, the team calculated supply distribution and travel times across the ancient ruins.

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

T																	T		
290	5000	30	2000	7000	170	170	70	7000	3700	20	500	30	3000	3700	500	290			
110	3000	30	70	20	30	50	500	20	30	300	300	7000	3700	370					

Round 293 to the nearest ten ☐ → T

Round 373 to the nearest ten ☐ → G

Round 31 to the nearest ten ☐ → E

Round 4,695 to the nearest thousand ☐ → H

Round 1,908 to the nearest thousand ☐ → V

Round 18 to the nearest ten ☐ → D

Round 3,666 to the nearest hundred ☐ → N

Round 46 to the nearest ten ☐ → C

Round 67 to the nearest ten ☐ → A

Round 520 to the nearest hundred ☐ → O

Round 347 to the nearest hundred ☐ → R

Round 168 to the nearest ten ☐ → L

Round 7,407 to the nearest thousand ☐ → I

Round 3,481 to the nearest thousand ☐ → S

Round 113 to the nearest ten ☐ → U

Scratch space:

CLUE 2 Word problems

> The team scanned the high tech pressure sensors along the temple floor, which rounded the intruder weight readings to the nearest ten kilograms.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

R								D	E	D
15	119	38	62	76	62	18	111			

.

Archaeologist lined up 5 rows of 3 rubies. How many rubies in all?

Answer: ☐ → **R**

Archaeologist found 24 ancient scrolls yesterday and 52 more today. How many ancient scrolls in all?

Answer: ☐ → **T**

There were 146 golden idols. 27 were used up. How many golden idols are left?

Answer: ☐ → **I**

Archaeologist found 2 bronze coins yesterday and 16 more today. How many bronze coins in all?

Answer: ☐ → **A**

Archaeologist found 56 ancient scrolls yesterday and 55 more today. How many ancient scrolls in all?

Answer: ☐ → **N**

There were 86 ancient scrolls. 24 were used up. How many ancient scrolls are left?

Answer: ☐ → **H**

There were 74 ancient scrolls. 36 were used up. How many ancient scrolls are left?

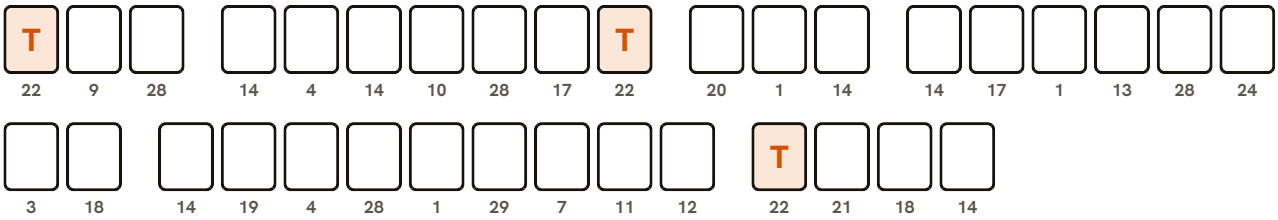
Answer: ☐ → **G**

Scratch space:

CLUE 3 Integers

> Analyzing the temperature changes and elevation drops inside the subterranean chambers required tracking positive and negative integers.

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



(-13) + 35 = ☐ → T

2 - (-9) = ☐ → N

(-10) + 38 = ☐ → E

(-15) + 36 = ☐ → O

(-10) + 34 = ☐ → D

8 - (-12) = ☐ → W

(-8) + 17 = ☐ → H

(-9) + 27 = ☐ → Y

(-6) + 7 = ☐ → A

(-1) + 5 = ☐ → U

(-8) + 21 = ☐ → R

(-15) + 44 = ☐ → K

(-15) + 25 = ☐ → P

2 - (-15) = ☐ → C

2 - (-5) = ☐ → I

(-4) + 16 = ☐ → G

(-14) + 28 = ☐ → S

(-10) + 13 = ☐ → B

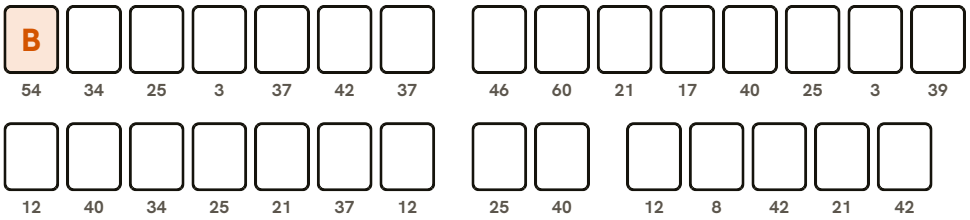
16 - (-3) = ☐ → Q

Scratch space:

CLUE 4 Percentages

> By evaluating the percentage of stolen relics recovered from each campsite, the investigators narrowed down the search grid.

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



75% of 72 = ☐ → **B**

20% of 300 = ☐ → **O**

5% of 840 = ☐ → **E**

10% of 460 = ☐ → **P**

25% of 84 = ☐ → **N**

5% of 500 = ☐ → **A**

40% of 20 = ☐ → **C**

75% of 4 = ☐ → **I**

75% of 52 = ☐ → **L**

50% of 74 = ☐ → **D**

5% of 680 = ☐ → **R**

5% of 800 = ☐ → **T**

20% of 60 = ☐ → **S**

10% of 170 = ☐ → **Y**

Scratch space:

CLUE 5 Missing addends - the last clue

> The vault door required entering missing weight values to balance the pressure scales left behind by the intruder.

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:

15 + ___ = 23 ☐	21 + ___ = 33 ☐	5 + ___ = 15 ☐	4 + ___ = 9 ☐
3 + ___ = 10 ☐	34 + ___ = 40 ☐	24 + ___ = 26 ☐	34 + ___ = 37 ☐
27 + ___ = 31 ☐	3 + ___ = 12 ☐	33 + ___ = 34 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain vanished into a cloud of smoke, then decoded the glyphs on the altar.
2. The villain blinded the night guards with a beam, then checked the ancient star map.
3. The villain shattered the stone lock with sound, then checked the ancient star map.
4. The villain vanished into a cloud of smoke, then cleared a path through dense vines.
5. The villain blinded the night guards with a beam, then cleared a path through dense vines.
6. The villain shattered the stone lock with sound, then cleared a path through dense vines.
7. The villain shattered the stone lock with sound, then decoded the glyphs on the altar.
8. The villain swung across the ancient chasm, then anchored ropes to the stone pillar.
9. The villain vanished into a cloud of smoke, then lit up the underground cavern.
10. The villain blinded the night guards with a beam, then lit up the underground cavern.
11. The villain vanished into a cloud of smoke, then anchored ropes to the stone pillar.
12. The villain glided down from the temple roof, then lit up the underground cavern.

TEACHER / PARENT

Answer Key

The Mystery of the Sunken Temple

Culprit: Aria Delgado

Smoke Bombs · Climbing Pitons · Right Handed · Braided Ponytail · Squeaking Toys

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT USE A DECODER RING"

Round 293 to the nearest ten = 290 (T) · Round 373 to the nearest ten = 370 (G) · Round 31 to the nearest ten = 30 (E) · Round 4,695 to the nearest thousand = 5000 (H) · Round 1,908 to the nearest thousand = 2000 (V) · Round 18 to the nearest ten = 20 (D) · Round 3,666 to the nearest hundred = 3700 (N) · Round 46 to the nearest ten = 50 (C) · Round 67 to the nearest ten = 70 (A) · Round 520 to the nearest hundred = 500 (O) · Round 347 to the nearest hundred = 300 (R) · Round 168 to the nearest ten = 170 (L) · Round 7,407 to the nearest thousand = 7000 (I) · Round 3,481 to the nearest thousand = 3000 (S) · Round 113 to the nearest ten = 110 (U)

Clue 2 (Word problems): "RIGHT HANDED"

Archaeologist lined up 5 rows of 3 rubies. How many rubies in all? = 15 (R) · Archaeologist found 24 ancient scrolls yesterday and 52 more today. How many ancient scrolls in all? = 76 (T) · There were 146 golden idols. 27 were used up. How many golden idols are left? = 119 (I) · Archaeologist found 2 bronze coins yesterday and 16 more today. How many bronze coins in all? = 18 (A) · Archaeologist found 56 ancient scrolls yesterday and 55 more today. How many ancient scrolls in all? = 111 (N) · There were 86 ancient scrolls. 24 were used up. How many ancient scrolls are left? = 62 (H) · There were 74 ancient scrolls. 36 were used up. How many ancient scrolls are left? = 38 (G)

Clue 3 (Integers): "THE SUSPECT WAS SCARED BY SQUEAKING TOYS"

(-13) + 35 = 22 (T) · 2 - (-9) = 11 (N) · (-10) + 38 = 28 (E) · (-15) + 36 = 21 (O) · (-10) + 34 = 24 (D) · 8 - (-12) = 20 (W) · (-8) + 17 = 9 (H) · (-9) + 27 = 18 (Y) · (-6) + 7 = 1 (A) · (-1) + 5 = 4 (U) · (-8) + 21 = 13 (R) · (-15) + 44 = 29 (K) · (-15) + 25 = 10 (P) · 2 - (-15) = 17 (C) · 2 - (-5) = 7 (I) · (-4) + 16 = 12 (G) · (-14) + 28 = 14 (S) · (-10) + 13 = 3 (B) · 16 - (-3) = 19 (Q)

Clue 4 (Percentages): "BRAIDED PONYTAIL STRANDS AT SCENE"

75% of 72 = 54 (B) · 20% of 300 = 60 (O) · 5% of 840 = 42 (E) · 10% of 460 = 46 (P) · 25% of 84 = 21 (N) · 5% of 500 = 25 (A) · 40% of 20 = 8 (C) · 75% of 4 = 3 (I) · 75% of 52 = 39 (L) · 50% of 74 = 37 (D) · 5% of 680 = 34 (R) · 5% of 800 = 40 (T) · 20% of 60 = 12 (S) · 10% of 170 = 17 (Y)

Clue 5 (Missing addends): surviving statement is box 11 → Aria Delgado

15 + ___ = 23 = 8 · 21 + ___ = 33 = 12 · 5 + ___ = 15 = 10 · 4 + ___ = 9 = 5 · 3 + ___ = 10 = 7 · 34 + ___ = 40 = 6 · 24 + ___ = 26 = 2 · 34 + ___ = 37 = 3 · 27 + ___ = 31 = 4 · 3 + ___ = 12 = 9 · 33 + ___ = 34 = 1