



# The Case of the Missing Ruby Idol

Grade 6 math · Multiplication, Skip counting, Word problems, Multi-step word problems, Missing addends · Reading level grades 3-4

Detective: \_\_\_\_\_ Date: \_\_\_\_\_

A sneaky temple thief snuck into the jungle ruins and snatched the ancient Ruby Idol! Solve the math clues to uncover who did it 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 thief is** \_\_\_\_\_

## Possible suspects

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

| NAME           | ESCAPE GEAR    | SPECIAL TOOL    | DOMINANT HAND | HAIR STYLE       | SECRET WEAKNESS   |
|----------------|----------------|-----------------|---------------|------------------|-------------------|
| Wyatt Wild     | Glider Wings   | Mag Boots       | Right Handed  | Shaved Head      | Bright Flashlight |
| Indy Vance     | Sonic Whistle  | Flash Grenade   | Left Handed   | Shaved Head      | Bright Flashlight |
| Rick Conner    | Sonic Whistle  | Pheromone Spray | Left Handed   | Shaved Head      | Loud Alarm        |
| Hugo Hiking    | Glider Wings   | Pheromone Spray | Left Handed   | Braided Red Hair | Loud Alarm        |
| Vera Valley    | Grappling Hook | Mag Boots       | Left Handed   | Shaved Head      | Bright Flashlight |
| Maya Croft     | Glider Wings   | Pheromone Spray | Left Handed   | Shaved Head      | Bright Flashlight |
| Gabe Hunter    | Smoke Bombs    | Net Launcher    | Left Handed   | Shaved Head      | Sneeze Powder     |
| Daisy Digger   | Sonic Whistle  | Pheromone Spray | Left Handed   | Braided Red Hair | Sneeze Powder     |
| Bruno Boulder  | Decoy Drones   | Flash Grenade   | Left Handed   | Shaved Head      | Bright Flashlight |
| Ruby Rivers    | Sonic Whistle  | Net Launcher    | Right Handed  | Spiky Black Hair | Bright Flashlight |
| Nora Gates     | Decoy Drones   | Pheromone Spray | Left Handed   | Shaved Head      | Loud Alarm        |
| Zack Ranger    | Grappling Hook | Flash Grenade   | Right Handed  | Shaved Head      | Sneeze Powder     |
| Sam Jones      | Decoy Drones   | Mag Boots       | Right Handed  | Shaved Head      | Bright Flashlight |
| Tess Horizon   | Sonic Whistle  | Flash Grenade   | Left Handed   | Spiky Black Hair | Bright Flashlight |
| Willa Woods    | Grappling Hook | Net Launcher    | Right Handed  | Braided Red Hair | Loud Alarm        |
| Toby Trail     | Grappling Hook | Flash Grenade   | Left Handed   | Braided Red Hair | Loud Alarm        |
| Leo Drake      | Grappling Hook | Torch Blaster   | Left Handed   | Shaved Head      | Bright Flashlight |
| Pippa Sterling | Sonic Whistle  | Net Launcher    | Left Handed   | Spiky Black Hair | Bright Flashlight |
| Jax Compass    | Smoke Bombs    | Flash Grenade   | Left Handed   | Braided Red Hair | Loud Alarm        |
| Sasha Summit   | Smoke Bombs    | Torch Blaster   | Left Handed   | Braided Red Hair | Loud Alarm        |
| Otis Outpost   | Smoke Bombs    | Net Launcher    | Left Handed   | Spiky Black Hair | Loud Alarm        |

## CLUE 1

## Multiplication facts (1-12)

We found rows of supply crates neatly packed in the jungle camp.

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

|    |   |     |    |    |     |     |    |     |     |    |    |    |    |    |    |     |
|----|---|-----|----|----|-----|-----|----|-----|-----|----|----|----|----|----|----|-----|
| T  |   |     | T  |    |     |     |    |     |     |    |    |    | T  |    |    |     |
| 32 | 9 | 100 | 32 | 9  | 110 | 100 | 25 | 4   | 110 | 4  | 45 | 18 | 32 | 66 | 44 | 100 |
|    |   |     |    |    |     |     |    |     |     |    |    |    |    |    |    |     |
| 72 | 9 | 100 | 12 | 18 | 88  | 18  | 45 | 100 | 44  | 72 | 12 | 63 | 90 |    |    |     |

$4 \times 8 = \square \rightarrow \boxed{\text{T}}$

$11 \times 6 = \square \rightarrow \boxed{\text{U}}$

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

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

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

$9 \times 1 = \square \rightarrow \boxed{\text{H}}$

$10 \times 9 = \square \rightarrow \boxed{\text{Y}}$

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

$4 \times 11 = \square \rightarrow \boxed{\text{S}}$

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

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

$10 \times 11 = \square \rightarrow \boxed{\text{I}}$

$11 \times 8 = \square \rightarrow \boxed{\text{M}}$

$9 \times 5 = \square \rightarrow \boxed{\text{N}}$

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

Scratch space:

## CLUE 2 Skip counting

Trail markers are spaced evenly along the muddy path.

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

|    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|
| T  |    |    | T  |    |    |    |    |    |     |    |    | T  |    |    |    |    |
| 45 | 27 | 40 | 45 | 27 | 36 | 40 | 50 | 21 | 130 | 40 | 60 | 45 | 27 | 40 | 36 | 6  |
|    |    |    | T  |    |    |    |    | T  |     |    |    |    |    |    |    |    |
| 30 | 40 | 50 | 45 | 27 | 20 | 33 | 60 | 45 | 22  | 9  | 6  | 42 | 30 | 22 | 14 | 35 |

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, \_\_, 50, 55  → **T**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, \_\_, 36, 39  → **N**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, \_\_, 70, 80  → **D**

Skip-count by 3s. Fill the blank: 3, 6, \_\_, 12, 15  → **P**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, \_\_, 24, 27  → **U**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, \_\_, 140, 150  → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, \_\_, 45, 48  → **Y**

Skip-count by 5s. Fill the blank: 5, 10, 15, \_\_, 25, 30  → **A**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, \_\_, 30, 33  → **H**

Skip-count by 2s. Fill the blank: 2, 4, \_\_, 8, 10  → **R**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, \_\_, 35, 40  → **L**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, \_\_, 39, 42  → **I**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, \_\_, 45, 50  → **E**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, \_\_, 24, 26  → **O**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, \_\_, 16, 18  → **C**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, \_\_, 40, 45  → **K**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, \_\_, 55, 60  → **F**

Scratch space:

## CLUE 3

## Word problems

The team counted all the expedition gear packed for the day.

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

Someone scared the villain off with

|    |    |    |    |    |   |    |   |   |   |    |   |    |    |    |   |
|----|----|----|----|----|---|----|---|---|---|----|---|----|----|----|---|
| B  |    |    |    |    |   |    | L | A | S |    | L |    |    |    |   |
| 65 | 85 | 70 | 44 | 13 | 9 | 42 |   |   |   | 13 |   | 70 | 44 | 13 | 9 |

There were 91 torch batteries. 26 were used up. How many torch batteries are left?

Answer:  → **B**

Scout found 24 canteen cups yesterday and 61 more today. How many canteen cups in all?

Answer:  → **R**

Scout lined up 7 rows of 10 map scrolls. How many map scrolls in all?

Answer:  → **I**

Scout lined up 4 rows of 11 compasses. How many compasses in all?

Answer:  → **G**

Scout found 4 compasses yesterday and 5 more today. How many compasses in all?

Answer:  → **T**

Scout found 6 torch batteries yesterday and 7 more today. How many torch batteries in all?

Answer:  → **H**

There were 75 compasses. 33 were used up. How many compasses are left?

Answer:  → **F**

Scratch space:

## CLUE 4

## Multi-step word problems

Sorting out the team's supplies took a few steps of careful counting.

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

A strand of S          hair turned up at the scene.

32      72      44      36      55      45      72      55      44      45

Scout earned 4 compasses in each of 4 rounds, plus 20 bonus compasses. Then 4 compasses were lost. How many compasses are left?

Answer:  → S

Scout earned 7 map scrolls in each of 3 rounds, plus 25 bonus map scrolls. Then 10 map scrolls were lost. How many map scrolls are left?

Answer:  → V

There were 213 canteen cups in all. 33 canteen cups were set aside. The rest were shared equally among 4 expedition team. How many canteen cups did each get?

Answer:  → D

Scout collected 29 canteen cups in the morning and 103 canteen cups in the afternoon, then split them equally among 3 expedition team. How many canteen cups did each get?

Answer:  → A

Scout collected 38 torch batteries in the morning and 72 torch batteries in the afternoon, then split them equally among 2 expedition team. How many torch batteries did each get?

Answer:  → E

There were 656 torch batteries in all. 8 torch batteries were set aside. The rest were shared equally among 9 expedition team. How many torch batteries did each get?

Answer:  → H

Scratch space:

**CLUE 5****Missing addends - the last clue**

Some map pieces are missing from the archway puzzle.

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:**

$19 + \underline{\quad} = 22$

$6 + \underline{\quad} = 16$

$10 + \underline{\quad} = 12$

$37 + \underline{\quad} = 49$

$18 + \underline{\quad} = 22$

$8 + \underline{\quad} = 15$

$28 + \underline{\quad} = 37$

$34 + \underline{\quad} = 35$

$31 + \underline{\quad} = 42$

$9 + \underline{\quad} = 15$

$19 + \underline{\quad} = 27$

**Step 2 - cross out the sentence with each answer:**

1. The villain threw a smoke bomb, then stomped in mag boots.
2. The villain deployed a decoy drone, then tossed a flash grenade.
3. The villain blew a sonic whistle, then tossed a flash grenade.
4. The villain blew a sonic whistle, then shot a net launcher.
5. The villain swung on a grappling hook, then fired a torch blaster.
6. The villain swung on a grappling hook, then sprayed pheromone mist.
7. The villain blew a sonic whistle, then stomped in mag boots.
8. The villain blew a sonic whistle, then fired a torch blaster.
9. The villain threw a smoke bomb, then fired a torch blaster.
10. The villain swung on a grappling hook, then stomped in mag boots.
11. The villain soared with glider wings, then fired a torch blaster.
12. The villain swung on a grappling hook, then tossed a flash grenade.

# Answer Key

## The Case of the Missing Ruby Idol

### Culprit: Leo Drake

Grappling Hook · Torch Blaster · Left Handed · Shaved Head · Bright Flashlight

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

### Clue 1 (Multiplication facts (1-12)): "THE THIEF DID NOT USE PHEROMONE SPRAY"

$4 \times 8 = 32$  (T) ·  $11 \times 6 = 66$  (U) ·  $4 \times 3 = 12$  (R) ·  $5 \times 5 = 25$  (F) ·  $9 \times 7 = 63$  (A) ·  $9 \times 1 = 9$  (H) ·  $10 \times 9 = 90$  (Y) ·  $2 \times 2 = 4$  (D) ·  $4 \times 11 = 44$  (S) ·  $10 \times 10 = 100$  (E) ·  $12 \times 6 = 72$  (P) ·  $10 \times 11 = 110$  (I) ·  $11 \times 8 = 88$  (M) ·  $9 \times 5 = 45$  (N) ·  $9 \times 2 = 18$  (O)

### Clue 2 (Skip counting): "THE THIEF USED THEIR LEFT HAND TO PRY LOCK"

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, \_\_, 50, 55 = 45 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, \_\_, 36, 39 = 33 (N) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, \_\_, 70, 80 = 60 (D) · Skip-count by 3s. Fill the blank: 3, 6, \_\_, 12, 15 = 9 (P) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, \_\_, 24, 27 = 21 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, \_\_, 140, 150 = 130 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, \_\_, 45, 48 = 42 (Y) · Skip-count by 5s. Fill the blank: 5, 10, 15, \_\_, 25, 30 = 20 (A) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, \_\_, 30, 33 = 27 (H) · Skip-count by 2s. Fill the blank: 2, 4, \_\_, 8, 10 = 6 (R) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, \_\_, 35, 40 = 30 (L) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, \_\_, 39, 42 = 36 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, \_\_, 45, 50 = 40 (E) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, \_\_, 24, 26 = 22 (O) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, \_\_, 16, 18 = 14 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, \_\_, 40, 45 = 35 (K) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, \_\_, 55, 60 = 50 (F)

### Clue 3 (Word problems): "BRIGHT FLASHLIGHT"

There were 91 torch batteries. 26 were used up. How many torch batteries are left? = 65 (B) · Scout found 24 canteen cups yesterday and 61 more today. How many canteen cups in all? = 85 (R) · Scout lined up 7 rows of 10 map scrolls. How many map scrolls in all? = 70 (I) · Scout lined up 4 rows of 11 compasses. How many compasses in all? = 44 (G) · Scout found 4 compasses yesterday and 5 more today. How many compasses in all? = 9 (T) · Scout found 6 torch batteries yesterday and 7 more today. How many torch batteries in all? = 13 (H) · There were 75 compasses. 33 were used up. How many compasses are left? = 42 (F)

### Clue 4 (Multi-step word problems): "SHAVED HEAD"

Scout earned 4 compasses in each of 4 rounds, plus 20 bonus compasses. Then 4 compasses were lost. How many compasses are left? = 32 (S) · Scout earned 7 map scrolls in each of 3 rounds, plus 25 bonus map scrolls. Then 10 map scrolls were lost. How many map scrolls are left? = 36 (V) · There were 213 canteen cups in all. 33 canteen cups were set aside. The rest were shared equally among 4 expedition team. How many canteen cups did each get? = 45 (D) · Scout collected 29 canteen cups in the morning and 103 canteen cups in the afternoon, then split them equally among 3 expedition team. How many canteen cups did each get? = 44 (A) · Scout collected 38 torch batteries in the morning and 72 torch batteries in the afternoon, then split them equally among 2 expedition team. How many torch batteries did each get? = 55 (E) · There were 656 torch batteries in all. 8 torch batteries were set aside. The rest were shared equally among 9 expedition team. How many torch batteries did each get? = 72 (H)

### Clue 5 (Missing addends): surviving statement is box 5 → Leo Drake

$19 + \underline{\quad} = 22 = 3$  ·  $6 + \underline{\quad} = 16 = 10$  ·  $10 + \underline{\quad} = 12 = 2$  ·  $37 + \underline{\quad} = 49 = 12$  ·  $18 + \underline{\quad} = 22 = 4$  ·  $8 + \underline{\quad} = 15 = 7$  ·  $28 + \underline{\quad} = 37 = 9$  ·  $34 + \underline{\quad} = 35 = 1$  ·  $31 + \underline{\quad} = 42 = 11$  ·  $9 + \underline{\quad} = 15 = 6$  ·  $19 + \underline{\quad} = 27 = 8$