The Mystery of the Emerald Idol

Grade 2 math · Subtraction, Place value, Addition, Skip counting, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone snuck into the lodge and took the ancient Emerald Idol! Help the detective team track down the thief before the boat leaves the island.

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 bandit is _____

Possible suspects

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

NAME	SPECIAL GEAR	JUNGLE SKILL	HABIT	HAT COLOR	FEAR
Owen Reef	Compass Watch	Track Finding	Left Handed	Brown Cap	Bright Light
Nora Vale	Metal Detector	Map Reading	Right Handed	Brown Cap	Loud Noise
Lily Grove	Metal Detector	Raft Steering	Right Handed	Green Cap	Bright Light
Leo Swift	Metal Detector	Track Finding	Left Handed	Red Cap	Soggy Boots
Ruby Marsh	Metal Detector	Tree Climbing	Right Handed	Red Cap	Soggy Boots
Tara Fern	Flashlight Lens	Tree Climbing	Left Handed	Red Cap	Soggy Boots
Max Ridge	Rope Launcher	Raft Steering	Left Handed	Brown Cap	Soggy Boots
Ivy Lake	Grappling Hook	Map Reading	Left Handed	Green Cap	Bright Light
Ava Brook	Metal Detector	Tree Climbing	Left Handed	Green Cap	Bright Light
Mason Bay	Compass Watch	Vine Swinging	Right Handed	Brown Cap	Bright Light
Noah Peak	Metal Detector	Vine Swinging	Right Handed	Brown Cap	Bright Light
Luke Cove	Rope Launcher	Vine Swinging	Right Handed	Brown Cap	Bright Light
Finn Pine	Grappling Hook	Raft Steering	Right Handed	Brown Cap	Loud Noise
Maya Cruz	Metal Detector	Tree Climbing	Right Handed	Brown Cap	Bright Light
Sienna Dune	Metal Detector	Tree Climbing	Left Handed	Brown Cap	Bright Light
Sam River	Metal Detector	Map Reading	Right Handed	Green Cap	Loud Noise
Jack Glen	Rope Launcher	Track Finding	Right Handed	Red Cap	Bright Light
Caleb Cliff	Flashlight Lens	Track Finding	Right Handed	Brown Cap	Bright Light
Ben Woods	Rope Launcher	Raft Steering	Left Handed	Red Cap	Bright Light
Eli Field	Grappling Hook	Map Reading	Left Handed	Brown Cap	Bright Light
Mia Coast	Grappling Hook	Vine Swinging	Right Handed	Red Cap	Loud Noise

CLUE 1 Subtraction

> The detective compares the total number of footprints found outside with the ones inside to see how many extra steps were taken.

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

T																		T	
30	53	29	15	60	18	18	21	60	82	71	80	29	39	82	80	30			

				T											
53	21	15	29	30	46	29	29	69	18	60	43	56	60	82	81

39	68	60	18	18	39

42 - 12 = ☐ → T

65 - 19 = ☐ → R

53 - 24 = ☐ → E

27 - 9 = ☐ → L

95 - 35 = ☐ → I

58 - 5 = ☐ → H

102 - 33 = ☐ → C

67 - 11 = ☐ → B

43 - 28 = ☐ → V

107 - 39 = ☐ → K

97 - 15 = ☐ → N

116 - 35 = ☐ → G

51 - 8 = ☐ → M

106 - 35 = ☐ → D

94 - 14 = ☐ → O

41 - 2 = ☐ → S

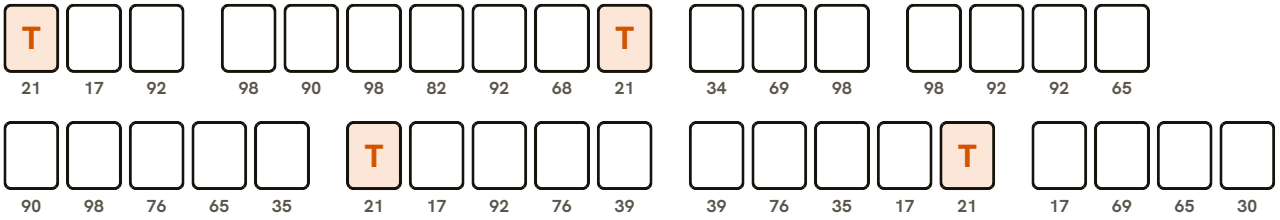
55 - 34 = ☐ → A

Scratch space:

CLUE 2 Place value

The detective looks at the tens and ones written on the supply chest lock to decode the secret code.

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



What number has 2 tens and 1 one? ☐ → T

What number has 3 tens and 5 ones? ☐ → G

What number has 8 tens and 2 ones? ☐ → P

What number has 6 tens and 8 ones? ☐ → C

What number has 7 tens and 6 ones? ☐ → I

What number has 9 tens and 0 ones? ☐ → U

What number has 6 tens and 5 ones? ☐ → N

What number has 9 tens and 2 ones? ☐ → E

What number has 3 tens and 9 ones? ☐ → R

What number has 3 tens and 0 ones? ☐ → D

What number has 1 ten and 7 ones? ☐ → H

What number has 6 tens and 9 ones? ☐ → A

What number has 3 tens and 4 ones? ☐ → W

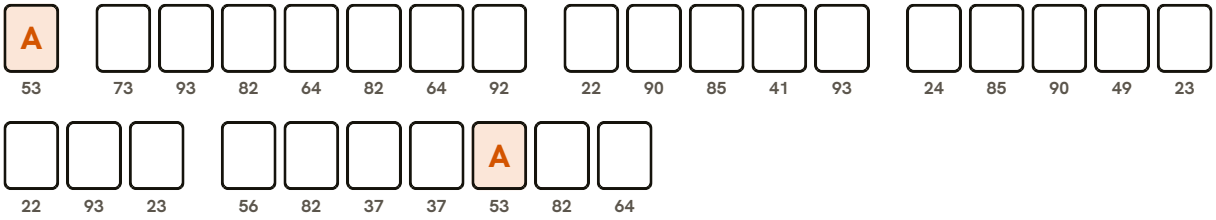
What number has 9 tens and 8 ones? ☐ → S

Scratch space:

CLUE 3 Addition

The detective adds up all the lost flashlight batteries found along the trail.

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



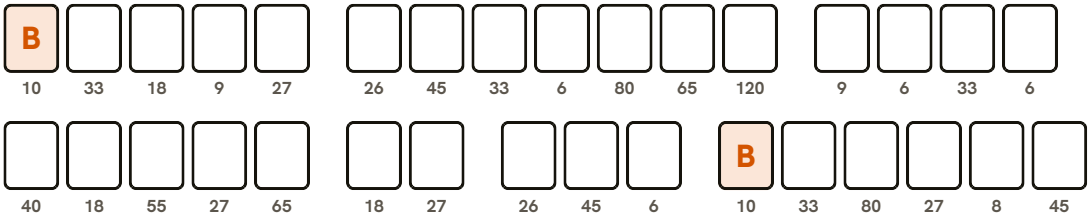
38 + 15 = ☐ → A	11 + 13 = ☐ → F	14 + 8 = ☐ → T
45 + 40 = ☐ → R	61 + 31 = ☐ → G	63 + 27 = ☐ → O
30 + 34 = ☐ → N	14 + 35 = ☐ → Z	23 + 18 = ☐ → C
30 + 26 = ☐ → V	52 + 21 = ☐ → S	7 + 16 = ☐ → E
34 + 48 = ☐ → I	17 + 20 = ☐ → L	58 + 35 = ☐ → H

Scratch space:

CLUE 4 Skip counting

The detective counts the tally marks left on the tree trunks by twos to trace the path.

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



Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 ☐ → **B**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, ___, 45, 50 ☐ → **F**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, ___, 130, 140 ☐ → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 ☐ → **N**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 ☐ → **T**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 ☐ → **U**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 ☐ → **H**

Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 ☐ → **C**

Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 ☐ → **E**

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

Skip-count by 3s. Fill the blank: 3, 6, ___, 12, 15 ☐ → **W**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, ___, 70, 75 ☐ → **D**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, ___, 21, 24 ☐ → **O**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 ☐ → A

Scratch space:

CLUE 5 Missing addends - the last clue

> The detective checks how many shiny coins are left in the pouch to find out how many were taken.

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:

7 + ___ = 14 ☐	8 + ___ = 16 ☐	2 + ___ = 8 ☐	2 + ___ = 7 ☐	5 + ___ = 9 ☐
7 + ___ = 8 ☐	7 + ___ = 17 ☐	10 + ___ = 21 ☐	9 + ___ = 11 ☐	
5 + ___ = 14 ☐	10 + ___ = 13 ☐			

Step 2 - cross out the sentence with each answer:

1. The villain swung across the camp on a grappling hook, then guided the path by reading maps.
2. The villain snared a wooden crate using a rope launcher, then steered a log raft down the rapid river.
3. The villain snared a wooden crate using a rope launcher, then guided the path by reading maps.
4. The villain checked directions with a compass watch, then guided the path by reading maps.
5. The villain scanned the ground with a metal detector, then climbed high up into the palm trees.
6. The villain flashed a bright beam using a flashlight lens, then followed footprints across the muddy dirt.
7. The villain snared a wooden crate using a rope launcher, then swung through the canopy vines.
8. The villain scanned the ground with a metal detector, then swung through the canopy vines.
9. The villain flashed a bright beam using a flashlight lens, then steered a log raft down the rapid river.
10. The villain checked directions with a compass watch, then climbed high up into the palm trees.
11. The villain flashed a bright beam using a flashlight lens, then guided the path by reading maps.
12. The villain checked directions with a compass watch, then swung through the canopy vines.

TEACHER / PARENT

Answer Key

The Mystery of the Emerald Idol

Culprit: Mason Bay

Compass Watch · Vine Swinging · Right Handed · Brown Cap · Bright Light

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Subtraction): "THE VILLAIN DOES NOT HAVE TREE CLIMBING SKILLS"

42 - 12 = 30 (T) · 65 - 19 = 46 (R) · 53 - 24 = 29 (E) · 27 - 9 = 18 (L) · 95 - 35 = 60 (I) · 58 - 5 = 53 (H) · 102 - 33 = 69 (C) · 67 - 11 = 56 (B) · 43 - 28 = 15 (V) · 107 - 39 = 68 (K) · 97 - 15 = 82 (N) · 116 - 35 = 81 (G) · 51 - 8 = 43 (M) · 106 - 35 = 71 (D) · 94 - 14 = 80 (O) · 41 - 2 = 39 (S) · 55 - 34 = 21 (A)

Clue 2 (Place value): "THE SUSPECT WAS SEEN USING THEIR RIGHT HAND"

What number has 2 tens and 1 one? = 21 (T) · What number has 3 tens and 5 ones? = 35 (G) · What number has 8 tens and 2 ones? = 82 (P) · What number has 6 tens and 8 ones? = 68 (C) · What number has 7 tens and 6 ones? = 76 (I) · What number has 9 tens and 0 ones? = 90 (U) · What number has 6 tens and 5 ones? = 65 (N) · What number has 9 tens and 2 ones? = 92 (E) · What number has 3 tens and 9 ones? = 39 (R) · What number has 3 tens and 0 ones? = 30 (D) · What number has 1 ten and 7 ones? = 17 (H) · What number has 6 tens and 9 ones? = 69 (A) · What number has 3 tens and 4 ones? = 34 (W) · What number has 9 tens and 8 ones? = 98 (S)

Clue 3 (Addition): "A SHINING TORCH FROZE THE VILLAIN"

38 + 15 = 53 (A) · 11 + 13 = 24 (F) · 14 + 8 = 22 (T) · 45 + 40 = 85 (R) · 61 + 31 = 92 (G) · 63 + 27 = 90 (O) · 30 + 34 = 64 (N) · 14 + 35 = 49 (Z) · 23 + 18 = 41 (C) · 30 + 26 = 56 (V) · 52 + 21 = 73 (S) · 7 + 16 = 23 (E) · 34 + 48 = 82 (I) · 17 + 20 = 37 (L) · 58 + 35 = 93 (H)

Clue 4 (Skip counting): "BROWN THREADS WERE FOUND ON THE BRANCH"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 = 10 (B) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, ___, 45, 50 = 40 (F) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, ___, 130, 140 = 120 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 = 27 (N) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (T) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 = 55 (U) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 = 45 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 = 8 (C) · Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 = 6 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, ___, 36, 39 = 33 (R) · Skip-count by 3s. Fill the blank: 3, 6, ___, 12, 15 = 9 (W) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, ___, 70, 75 = 65 (D) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, ___, 21, 24 = 18 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 = 80 (A)

Clue 5 (Missing addends): surviving statement is box 12 → Mason Bay

7 + ___ = 14 = 7 · 8 + ___ = 16 = 8 · 2 + ___ = 8 = 6 · 2 + ___ = 7 = 5 · 5 + ___ = 9 = 4 · 7 + ___ = 8 = 1 · 7 + ___ = 17 = 10 · 10 + ___ = 21 = 11 · 9 + ___ = 11 = 2 · 5 + ___ = 14 = 9 · 10 + ___ = 13 = 3