The Whispering Vines Mystery

Grade 4 math · Place value, Addition, Multiplication, Skip counting, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

The priceless Golden Pineapple has vanished from the Jungle Basecamp! The culprit left a trail of muddy boots and mysterious gear. As a junior explorer, you must follow the clues, use your math skills, and find out which rogue explorer took it before they escape on the riverboat!

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

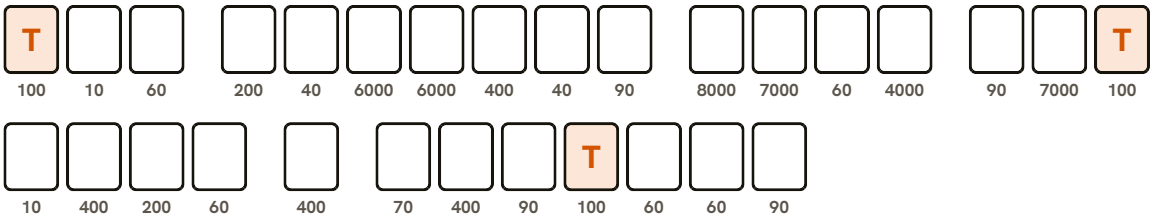
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY TOOL	BACKPACK ITEM	WRIST ACCESSORY	HAT STYLE	JUNGLE SNACK
Toby Trail	metal detector	walkie talkie	wears a watch	pith helmet	dried mango
Sam Sterling	grappling hook	camera	wears a watch	pith helmet	banana chips
Mia Thorne	machete	camera	wears a watch	brown fedora	trail mix
Indiana Jones	grappling hook	camera	wears a watch	brown fedora	banana chips
Max Hunter	metal detector	flashlight	wears a watch	red cap	dried mango
Ruby Rhodes	jungle compass	flashlight	wears a watch	red cap	dried mango
Lara Croft	machete	climbing rope	wears a watch	pith helmet	banana chips
Rex Rust	jungle compass	canteen	wears a compass	pith helmet	dried mango
Gemma Stone	metal detector	walkie talkie	wears a compass	red cap	banana chips
Leo Alvarez	metal detector	camera	wears a watch	brown fedora	trail mix
Ivy Vines	magnifying glass	walkie talkie	wears a compass	pith helmet	banana chips
Ben Mercer	machete	walkie talkie	wears a watch	red cap	banana chips
Luke Ledger	jungle compass	walkie talkie	wears a watch	red cap	trail mix
Jack Wilder	jungle compass	climbing rope	wears a compass	red cap	banana chips
Zoe Carter	jungle compass	walkie talkie	wears a watch	pith helmet	dried mango
Diego Marquez	jungle compass	walkie talkie	wears a watch	pith helmet	banana chips
Jane Goodall	grappling hook	climbing rope	wears a watch	pith helmet	banana chips
Dora Marquez	magnifying glass	flashlight	wears a compass	red cap	dried mango
Finn Fletcher	jungle compass	flashlight	wears a watch	pith helmet	dried mango
Penny Pine	jungle compass	canteen	wears a watch	pith helmet	banana chips
Chloe Canyon	jungle compass	canteen	wears a watch	brown fedora	banana chips

CLUE 1 Place value

A locked digital chest holds the first clue! We need to read the code by looking at the hundreds, tens, and ones places on the keypad.

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



What is the value of the 1 in 9,138? ☐ → T

What is the value of the 4 in 6,341? ☐ → I

What is the value of the 6 in 86,375? ☐ → L

What is the value of the 9 in 598? ☐ → N

What is the value of the 4 in 463? ☐ → A

What is the value of the 7 in 57,503? ☐ → O

What is the value of the 8 in 8,642? ☐ → D

What is the value of the 2 in 260? ☐ → V

What is the value of the 7 in 874? ☐ → C

What is the value of the 6 in 360? ☐ → E

What is the value of the 4 in 14,237? ☐ → S

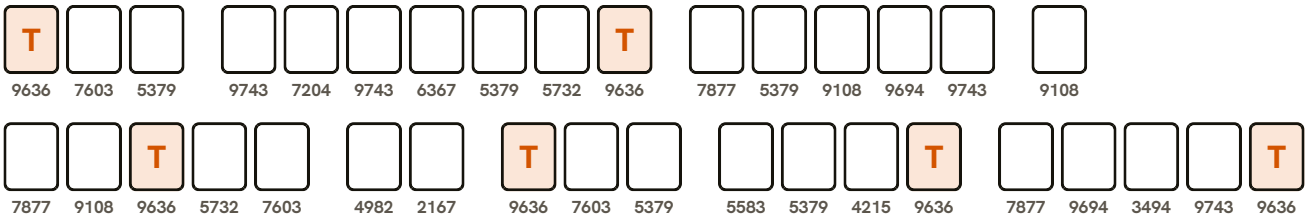
What is the value of the 1 in 6,716? ☐ → H

Scratch space:

CLUE 2 Addition

> We found footprints going in two directions. Let us add the left footprints to the right footprints to find the total count.

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



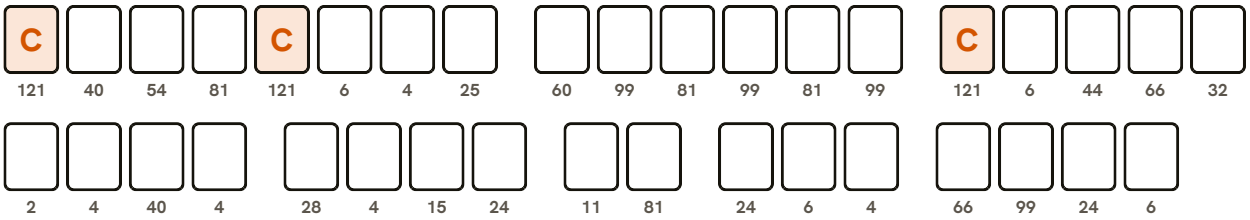
5220 + 4416 = ☐ → T	3480 + 4397 = ☐ → W	1471 + 696 = ☐ → N
3004 + 2375 = ☐ → E	2149 + 2833 = ☐ → O	2694 + 4510 = ☐ → U
6243 + 3451 = ☐ → R	2241 + 1253 = ☐ → I	3180 + 2552 = ☐ → C
5852 + 3891 = ☐ → S	1398 + 2817 = ☐ → F	3623 + 2744 = ☐ → P
4511 + 3092 = ☐ → H	2755 + 2828 = ☐ → L	3067 + 6041 = ☐ → A

Scratch space:

CLUE 3 Multiplication facts (1-12)

> The suspect climbed up a wall of ancient tiles. The tiles are lined up in neat rows and columns. Multiply them to count the path!

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



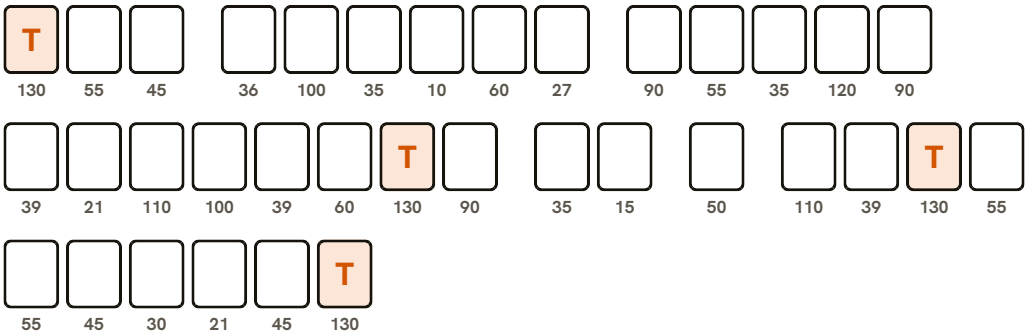
11 × 11 = ☐ → C	3 × 2 = ☐ → H	3 × 5 = ☐ → F
11 × 6 = ☐ → P	5 × 5 = ☐ → D	5 × 8 = ☐ → R
12 × 5 = ☐ → B	4 × 11 = ☐ → I	1 × 11 = ☐ → O
4 × 7 = ☐ → L	6 × 4 = ☐ → T	9 × 9 = ☐ → N	8 × 4 = ☐ → S
4 × 1 = ☐ → E	1 × 2 = ☐ → W	6 × 9 = ☐ → U	11 × 9 = ☐ → A

Scratch space:

CLUE 4 Skip counting

> The escape path goes across stepping stones over a muddy swamp. The stones are numbered by skip counting. Let us follow the pattern!

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



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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, ___, 33, 36 ☐ → **L**

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, ___, 65, 70 ☐ → **N**

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

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

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, ___, 120, 130 ☐ → **P**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, ___, 110, 120 ☐ → **R**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 ☐ → **M**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, ___, 42, 45 ☐ → **I**

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, ___, 40, 45 ☐ → **O**

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

Scratch space:

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

> The team found a stash of banana slices left behind. If we share them equally among our rescue monkeys, we can find the final secret!

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:

121 ÷ 11 = ☐	84 ÷ 7 = ☐	12 ÷ 3 = ☐	30 ÷ 10 = ☐	14 ÷ 2 = ☐
60 ÷ 6 = ☐	72 ÷ 9 = ☐	66 ÷ 11 = ☐	54 ÷ 6 = ☐	24 ÷ 12 = ☐
1 ÷ 1 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain plotted a quick escape route using a jungle compass, then tied up the camp gate with climbing rope.
2. The villain examined the ancient lock with a magnifying glass, then spilled fresh water from a leaky canteen.
3. The villain searched the sandy floor with a metal detector, then whispered a secret radio code into a walkie talkie.
4. The villain cleared a path through the thick brush with a machete, then tied up the camp gate with climbing rope.
5. The villain plotted a quick escape route using a jungle compass, then whispered a secret radio code into a walkie talkie.
6. The villain swung across the camp fence using a grappling hook, then lit up the dark jungle trail with a flashlight.
7. The villain examined the ancient lock with a magnifying glass, then snapped a quick photo of the empty pedestal with a camera.
8. The villain plotted a quick escape route using a jungle compass, then lit up the dark jungle trail with a flashlight.
9. The villain examined the ancient lock with a magnifying glass, then whispered a secret radio code into a walkie talkie.
10. The villain cleared a path through the thick brush with a machete, then whispered a secret radio code into a walkie talkie.
11. The villain swung across the camp fence using a grappling hook, then snapped a quick photo of the empty pedestal with a camera.
12. The villain swung across the camp fence using a grappling hook, then tied up the camp gate with climbing rope.

TEACHER / PARENT

Answer Key

The Whispering Vines Mystery

Culprit: Diego Marquez

jungle compass · walkie talkie · wears a watch · pith helmet · banana chips

Trail: Start 21 → Clue 1 18 → Clue 2 14 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT HAVE A CANTEEN"

What is the value of the 1 in 9,138? = 100 (T) · What is the value of the 4 in 6,341? = 40 (I) · What is the value of the 6 in 86,375? = 6000 (L) · What is the value of the 9 in 598? = 90 (N) · What is the value of the 4 in 463? = 400 (A) · What is the value of the 7 in 57,503? = 7000 (O) · What is the value of the 8 in 8,642? = 8000 (D) · What is the value of the 2 in 260? = 200 (V) · What is the value of the 7 in 874? = 70 (C) · What is the value of the 6 in 360? = 60 (E) · What is the value of the 4 in 14,237? = 4000 (S) · What is the value of the 1 in 6,716? = 10 (H)

Clue 2 (Addition): "THE SUSPECT WEARS A WATCH ON THE LEFT WRIST"

5220 + 4416 = 9636 (T) · 3480 + 4397 = 7877 (W) · 1471 + 696 = 2167 (N) · 3004 + 2375 = 5379 (E) · 2149 + 2833 = 4982 (O) · 2694 + 4510 = 7204 (U) · 6243 + 3451 = 9694 (R) · 2241 + 1253 = 3494 (I) · 3180 + 2552 = 5732 (C) · 5852 + 3891 = 9743 (S) · 1398 + 2817 = 4215 (F) · 3623 + 2744 = 6367 (P) · 4511 + 3092 = 7603 (H) · 2755 + 2828 = 5583 (L) · 3067 + 6041 = 9108 (A)

Clue 3 (Multiplication facts (1-12)): "CRUNCHED BANANA CHIPS WERE LEFT ON THE PATH"

11 × 11 = 121 (C) · 3 × 2 = 6 (H) · 3 × 5 = 15 (F) · 11 × 6 = 66 (P) · 5 × 5 = 25 (D) · 5 × 8 = 40 (R) · 12 × 5 = 60 (B) · 4 × 11 = 44 (I) · 1 × 11 = 11 (O) · 4 × 7 = 28 (L) · 6 × 4 = 24 (T) · 9 × 9 = 81 (N) · 8 × 4 = 32 (S) · 4 × 1 = 4 (E) · 1 × 2 = 2 (W) · 6 × 9 = 54 (U) · 11 × 9 = 99 (A)

Clue 4 (Skip counting): "THE GROUND SHOWS IMPRINTS OF A PITH HELMET"

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, ___, 140, 150 = 130 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, ___, 33, 36 = 30 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 = 50 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 = 55 (H) · Skip-count by 5s. Fill the blank: 5, 10, ___, 20, 25 = 15 (F) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, ___, 65, 70 = 60 (N) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, ___, 130, 140 = 120 (W) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, ___, 100, 110 = 90 (S) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 = 45 (E) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 = 10 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, ___, 120, 130 = 110 (P) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, ___, 110, 120 = 100 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 = 21 (M) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, ___, 42, 45 = 39 (I) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 = 27 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, ___, 40, 45 = 35 (O) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, ___, 39, 42 = 36 (G)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Diego Marquez

121 ÷ 11 = 11 · 84 ÷ 7 = 12 · 12 ÷ 3 = 4 · 30 ÷ 10 = 3 · 14 ÷ 2 = 7 · 60 ÷ 6 = 10 · 72 ÷ 9 = 8 · 66 ÷ 11 = 6 · 54 ÷ 6 = 9 · 24 ÷ 12 = 2 · 1 ÷ 1 = 1