The Mystery of the Sunken Compass

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

Detective: _____ **Date:** _____

Someone sneaked into the main lodge and swiped the golden camp compass! The Treehouse Club needs to search the camp, gather evidence, and figure out who took it before the evening campfire.

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 Island Thief is _____

Possible suspects

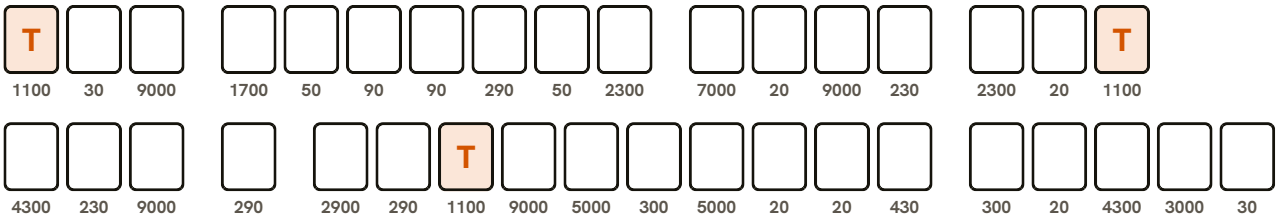
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	MAIN GEAR	EXTRA TOOL	DOMINANT HAND	HEADWEAR	CAMP TRAP
Ethan Price	Jet Shoes	Waterproof Pouch	Left-handed	Blue Cap	Loud Whistle
Chloe Diaz	Scuba Gear	Waterproof Pouch	Right-handed	Red Bandana	Loud Whistle
Lily Ward	Rope Ladder	Whistle Band	Right-handed	Red Bandana	Bright Flashlight
Jack Hayes	Rope Ladder	Whistle Band	Left-handed	Red Bandana	Pine Sap
Ruby Kim	Grappling Hook	Waterproof Pouch	Left-handed	Red Bandana	Bright Flashlight
Ava Ross	Grappling Hook	Whistle Band	Left-handed	Green Visor	Loud Whistle
Grace Hill	Scuba Gear	Whistle Band	Left-handed	Red Bandana	Bright Flashlight
Finn Morgan	Rope Ladder	Night Visor	Right-handed	Green Visor	Loud Whistle
Mia Chang	Rope Ladder	Flash Beacon	Right-handed	Green Visor	Bright Flashlight
Nora Patel	Jet Shoes	Flash Beacon	Left-handed	Red Bandana	Bright Flashlight
Sam Rivera	Glider Wings	Waterproof Pouch	Left-handed	Red Bandana	Loud Whistle
Toby Walsh	Rope Ladder	Waterproof Pouch	Left-handed	Green Visor	Bright Flashlight
Ella Cole	Jet Shoes	Walkie Talkie	Right-handed	Blue Cap	Bright Flashlight
Maya Cruz	Rope Ladder	Night Visor	Left-handed	Red Bandana	Bright Flashlight
Eli Brooks	Scuba Gear	Night Visor	Left-handed	Red Bandana	Bright Flashlight
Caleb Stone	Jet Shoes	Walkie Talkie	Left-handed	Green Visor	Pine Sap
Zoe Chen	Scuba Gear	Walkie Talkie	Right-handed	Green Visor	Bright Flashlight
Owen Drake	Jet Shoes	Whistle Band	Right-handed	Red Bandana	Bright Flashlight
Leo Vance	Glider Wings	Waterproof Pouch	Right-handed	Red Bandana	Pine Sap
Mason Ellis	Jet Shoes	Whistle Band	Left-handed	Blue Cap	Pine Sap
Max Bennett	Glider Wings	Walkie Talkie	Left-handed	Blue Cap	Bright Flashlight

CLUE 1 Rounding

> The lookout scanner display shows estimated distances rounded to the nearest ten. Round the numbers to reveal the first piece of evidence.

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



Round 1,112 to the nearest hundred ☐ → T

Round 54 to the nearest ten ☐ → I

Round 2,304 to the nearest hundred ☐ → N

Round 2,503 to the nearest thousand ☐ → C

Round 7,375 to the nearest thousand ☐ → D

Round 426 to the nearest ten ☐ → F

Round 33 to the nearest ten ☐ → H

Round 5,437 to the nearest thousand ☐ → R

Round 19 to the nearest ten ☐ → O

Round 294 to the nearest ten ☐ → A

Round 1,651 to the nearest hundred ☐ → V

Round 2,903 to the nearest hundred ☐ → W

Round 233 to the nearest ten ☐ → S

Round 280 to the nearest hundred ☐ → P

Round 8,644 to the nearest thousand ☐ → E

Round 4,318 to the nearest hundred ☐ → U

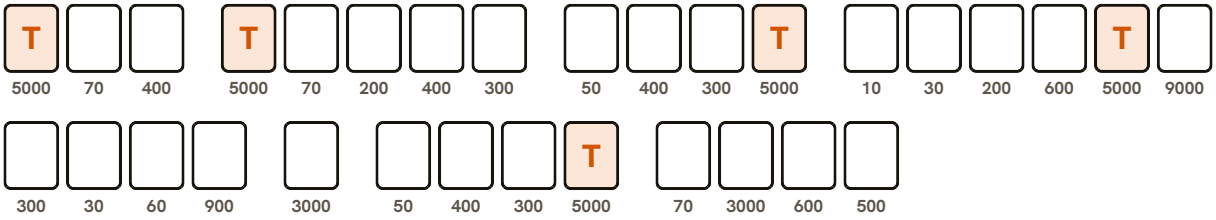
Round 91 to the nearest ten ☐ → L

Scratch space:

CLUE 2 Place value

The locked trailbox needs a code built from place values. Check the value of each digit to open the latch.

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



What is the value of the 5 in 5,927? ☐ → T

What is the value of the 1 in 715? ☐ → P

What is the value of the 3 in 3,828? ☐ → A

What is the value of the 3 in 7,376? ☐ → F

What is the value of the 5 in 8,589? ☐ → D

What is the value of the 7 in 2,076? ☐ → H

What is the value of the 3 in 236? ☐ → R

What is the value of the 4 in 3,411? ☐ → E

What is the value of the 9 in 922? ☐ → M

What is the value of the 6 in 655? ☐ → N

What is the value of the 5 in 9,853? ☐ → L

What is the value of the 6 in 3,261? ☐ → O

What is the value of the 2 in 217? ☐ → I

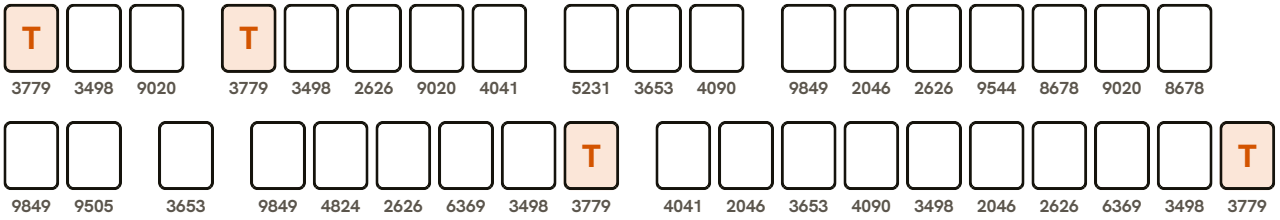
What is the value of the 9 in 29,758? ☐ → S

Scratch space:

CLUE 3 Addition

The detectives tallied footmarks along the muddy shore. Add the numbers to trace the trail.

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



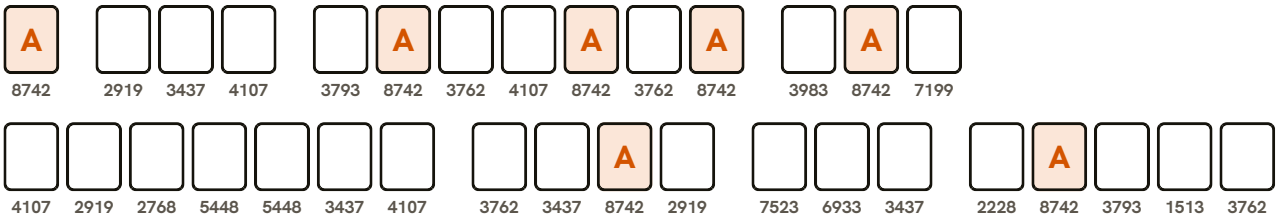
2371 + 1408 = ☐ → T	6360 + 3489 = ☐ → B	2504 + 1586 = ☐ → S
1735 + 3089 = ☐ → R	5865 + 3679 = ☐ → N	3228 + 5450 = ☐ → D
2236 + 2995 = ☐ → W	2276 + 1377 = ☐ → A	1318 + 1308 = ☐ → I
5345 + 3675 = ☐ → E	4773 + 4732 = ☐ → Y	2735 + 1306 = ☐ → F
3596 + 2773 = ☐ → G	1687 + 1811 = ☐ → H	1242 + 804 = ☐ → L

Scratch space:

CLUE 4 Subtraction

> Comparing supply lists before and after the raid shows what went missing. Subtract the amounts to crack the clue.

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



12051 - 3309 = ☐ → A	3297 - 1069 = ☐ → C	7800 - 601 = ☐ → S
6456 - 2473 = ☐ → W	3979 - 1211 = ☐ → O	5644 - 2207 = ☐ → E
5574 - 4061 = ☐ → I	11703 - 4180 = ☐ → T	5640 - 1878 = ☐ → N
7462 - 3355 = ☐ → D	7239 - 4320 = ☐ → R	4449 - 656 = ☐ → B
7044 - 111 = ☐ → H	9459 - 4011 = ☐ → P	

Scratch space:

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

> The search area is divided into equal sections for the team. Divide the total grid to discover the final clue.

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:

6 ÷ 6 = ☐	24 ÷ 8 = ☐	44 ÷ 4 = ☐	28 ÷ 7 = ☐	70 ÷ 10 = ☐
48 ÷ 6 = ☐	24 ÷ 12 = ☐	40 ÷ 8 = ☐	48 ÷ 8 = ☐	9 ÷ 1 = ☐
10 ÷ 1 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain dived under the dock with scuba gear, then scouted ahead with a night visor.
2. The villain swung across the creek with a grappling hook, then tucked the loot into a waterproof pouch.
3. The villain dived under the dock with scuba gear, then blew a sharp signal on a whistle band.
4. The villain climbed the high wall with a rope ladder, then blew a sharp signal on a whistle band.
5. The villain swung across the creek with a grappling hook, then scouted ahead with a night visor.
6. The villain swung across the creek with a grappling hook, then chattered into a secret walkie talkie.
7. The villain zoomed up the path with jet shoes, then scouted ahead with a night visor.
8. The villain zoomed up the path with jet shoes, then tucked the loot into a waterproof pouch.
9. The villain zoomed up the path with jet shoes, then blew a sharp signal on a whistle band.
10. The villain climbed the high wall with a rope ladder, then chattered into a secret walkie talkie.
11. The villain climbed the high wall with a rope ladder, then scouted ahead with a night visor.
12. The villain zoomed up the path with jet shoes, then signaled a partner using a flash beacon.

TEACHER / PARENT

Answer Key

The Mystery of the Sunken Compass

Culprit: Nora Patel

Jet Shoes · Flash Beacon · Left-handed · Red Bandana · Bright Flashlight

Trail: Start 21 → Clue 1 15 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT USE A WATERPROOF POUCH"

Round 1,112 to the nearest hundred = 1100 (T) · Round 54 to the nearest ten = 50 (I) · Round 2,304 to the nearest hundred = 2300 (N) · Round 2,503 to the nearest thousand = 3000 (C) · Round 7,375 to the nearest thousand = 7000 (D) · Round 426 to the nearest ten = 430 (F) · Round 33 to the nearest ten = 30 (H) · Round 5,437 to the nearest thousand = 5000 (R) · Round 19 to the nearest ten = 20 (O) · Round 294 to the nearest ten = 290 (A) · Round 1,651 to the nearest hundred = 1700 (V) · Round 2,903 to the nearest hundred = 2900 (W) · Round 233 to the nearest ten = 230 (S) · Round 280 to the nearest hundred = 300 (P) · Round 8,644 to the nearest thousand = 9000 (E) · Round 4,318 to the nearest hundred = 4300 (U) · Round 91 to the nearest ten = 90 (L)

Clue 2 (Place value): "THE THIEF LEFT PRINTS FROM A LEFT HAND"

What is the value of the 5 in 5,927? = 5000 (T) · What is the value of the 1 in 715? = 10 (P) · What is the value of the 3 in 3,828? = 3000 (A) · What is the value of the 3 in 7,376? = 300 (F) · What is the value of the 5 in 8,589? = 500 (D) · What is the value of the 7 in 2,076? = 70 (H) · What is the value of the 3 in 236? = 30 (R) · What is the value of the 4 in 3,411? = 400 (E) · What is the value of the 9 in 922? = 900 (M) · What is the value of the 6 in 655? = 600 (N) · What is the value of the 5 in 9,853? = 50 (L) · What is the value of the 6 in 3,261? = 60 (O) · What is the value of the 2 in 217? = 200 (I) · What is the value of the 9 in 29,758? = 9000 (S)

Clue 3 (Addition): "THE THIEF WAS BLINDED BY A BRIGHT FLASHLIGHT"

2371 + 1408 = 3779 (T) · 6360 + 3489 = 9849 (B) · 2504 + 1586 = 4090 (S) · 1735 + 3089 = 4824 (R) · 5865 + 3679 = 9544 (N) · 3228 + 5450 = 8678 (D) · 2236 + 2995 = 5231 (W) · 2276 + 1377 = 3653 (A) · 1318 + 1308 = 2626 (I) · 5345 + 3675 = 9020 (E) · 4773 + 4732 = 9505 (Y) · 2735 + 1306 = 4041 (F) · 3596 + 2773 = 6369 (G) · 1687 + 1811 = 3498 (H) · 1242 + 804 = 2046 (L)

Clue 4 (Subtraction): "A RED BANDANA WAS DROPPED NEAR THE CABIN"

12051 - 3309 = 8742 (A) · 3297 - 1069 = 2228 (C) · 7800 - 601 = 7199 (S) · 6456 - 2473 = 3983 (W) · 3979 - 1211 = 2768 (O) · 5644 - 2207 = 3437 (E) · 5574 - 4061 = 1513 (I) · 11703 - 4180 = 7523 (T) · 5640 - 1878 = 3762 (N) · 7462 - 3355 = 4107 (D) · 7239 - 4320 = 2919 (R) · 4449 - 656 = 3793 (B) · 7044 - 111 = 6933 (H) · 9459 - 4011 = 5448 (P)

Clue 5 (Division facts (1-12)): surviving statement is box 12 → Nora Patel

6 ÷ 6 = 1 · 24 ÷ 8 = 3 · 44 ÷ 4 = 11 · 28 ÷ 7 = 4 · 70 ÷ 10 = 7 · 48 ÷ 6 = 8 · 24 ÷ 12 = 2 · 40 ÷ 8 = 5 · 48 ÷ 8 = 6 · 9 ÷ 1 = 9 · 10 ÷ 1 = 10