The Sunken Compass Mystery

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

Detective: _____ **Date:** _____

A sneaky island bandit swiped the golden sun compass right out of the camp tent! The expedition squad needs your math skills to crack the hidden clues and catch the culprit.

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 bandit is _____

Possible suspects

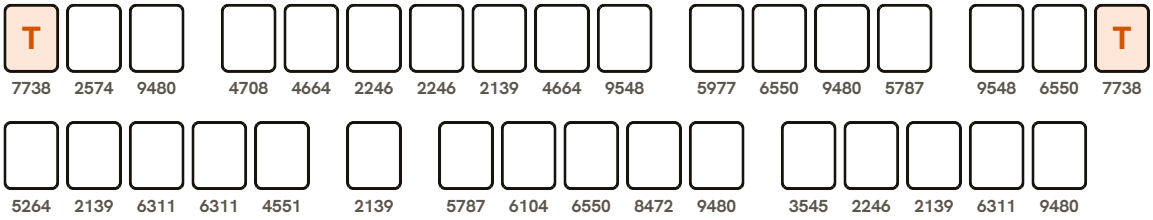
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	TRAVEL GEAR	POCKET TOOL	DOMINANT HAND	HEADWEAR	DISTRACTION TRAP
Seeker Lily	JUNGLE STILTS	SIGNAL HORN	LEFT HANDED	GOLDEN CAP	LOUD BELL
Pioneer Owen	GRAPPLING HOOK	TREASURE MAP	RIGHT HANDED	BLUE BANDANA	CITRUS SPRAY
Ranger Leo	JUNGLE STILTS	ROPE LADDER	LEFT HANDED	BLUE BANDANA	CITRUS SPRAY
Coastguard Noah	JUNGLE STILTS	SMOKE FLARE	LEFT HANDED	BLUE BANDANA	LOUD BELL
Rover Zoe	SAND SKIMMER	ROPE LADDER	RIGHT HANDED	BLUE BANDANA	LOUD BELL
Skywatcher Liam	GLIDER WINGS	TREASURE MAP	LEFT HANDED	GREEN HELMET	BRIGHT LIGHT
Voyager Ella	GRAPPLING HOOK	TREASURE MAP	RIGHT HANDED	BLUE BANDANA	BRIGHT LIGHT
Caver Mia	GLIDER WINGS	POCKET COMPASS	RIGHT HANDED	BLUE BANDANA	CITRUS SPRAY
Diver Ethan	SAND SKIMMER	POCKET COMPASS	LEFT HANDED	BLUE BANDANA	CITRUS SPRAY
Navigator Ben	SAND SKIMMER	TREASURE MAP	RIGHT HANDED	GOLDEN CAP	BRIGHT LIGHT
Captain Avery	JUNGLE STILTS	TREASURE MAP	LEFT HANDED	BLUE BANDANA	CITRUS SPRAY
Guide Mason	GLIDER WINGS	ROPE LADDER	RIGHT HANDED	GREEN HELMET	LOUD BELL
Trekker Caleb	SAND SKIMMER	TREASURE MAP	RIGHT HANDED	BLUE BANDANA	LOUD BELL
Forager James	SAND SKIMMER	SMOKE FLARE	RIGHT HANDED	BLUE BANDANA	CITRUS SPRAY
Hiker Jack	GLIDER WINGS	ROPE LADDER	RIGHT HANDED	BLUE BANDANA	CITRUS SPRAY
Surveyor Lucas	GRAPPLING HOOK	ROPE LADDER	RIGHT HANDED	GOLDEN CAP	LOUD BELL
Pathfinder Ruby	JUNGLE STILTS	SIGNAL HORN	RIGHT HANDED	GREEN HELMET	BRIGHT LIGHT
Pilot Chloe	GLIDER WINGS	SMOKE FLARE	LEFT HANDED	GOLDEN CAP	CITRUS SPRAY
Sailor Ivy	GRAPPLING HOOK	POCKET COMPASS	RIGHT HANDED	GREEN HELMET	CITRUS SPRAY
Explorer Maya	JUNGLE STILTS	POCKET COMPASS	LEFT HANDED	GREEN HELMET	BRIGHT LIGHT
Outrider Ava	SAND SKIMMER	SIGNAL HORN	RIGHT HANDED	BLUE BANDANA	CITRUS SPRAY

CLUE 1 Addition

Ranger Leo counted up the tally marks on the supply crate to reveal the first secret note.

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



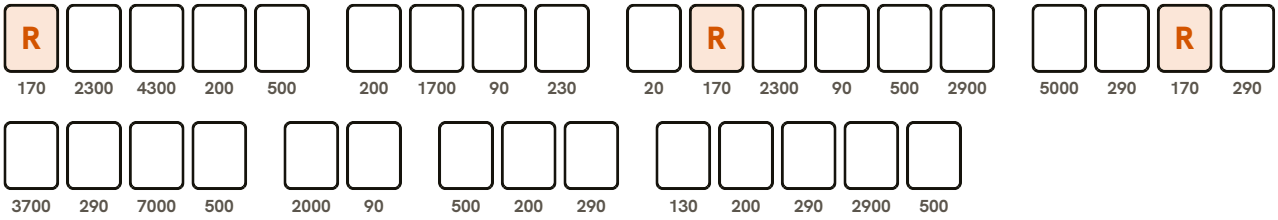
3690 + 4048 = ☐ → T	2821 + 3729 = ☐ → O	686 + 1560 = ☐ → L
2258 + 3006 = ☐ → C	2169 + 3618 = ☐ → S	2000 + 2551 = ☐ → Y
2192 + 2472 = ☐ → I	4015 + 2296 = ☐ → R	1829 + 4148 = ☐ → D
4887 + 4661 = ☐ → N	2964 + 5508 = ☐ → K	1266 + 1308 = ☐ → H
1212 + 2333 = ☐ → F	1367 + 772 = ☐ → A	2507 + 3597 = ☐ → M
2971 + 1737 = ☐ → V	5130 + 4350 = ☐ → E	

Scratch space:

CLUE 2 Rounding

The team checked the dial on the island radar station which rounded the signals to get a clear match.

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



Round 169 to the nearest ten ☐ → R

Round 5,083 to the nearest thousand ☐ → W

Round 4,294 to the nearest hundred ☐ → G

Round 23 to the nearest ten ☐ → P

Round 289 to the nearest ten ☐ → E

Round 7,122 to the nearest thousand ☐ → F

Round 2,925 to the nearest hundred ☐ → S

Round 231 to the nearest hundred ☐ → H

Round 1,744 to the nearest hundred ☐ → A

Round 2,421 to the nearest thousand ☐ → O

Round 88 to the nearest ten ☐ → N

Round 514 to the nearest hundred ☐ → T

Round 229 to the nearest ten ☐ → D

Round 130 to the nearest ten ☐ → C

Round 3,716 to the nearest hundred ☐ → L

Round 2,335 to the nearest hundred ☐ → I

Scratch space:

CLUE 3 Subtraction

> Tracker Sam calculated how many coconut canteens were missing from the shed.

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



4216 - 2078 = ☐ → C

2289 - 401 = ☐ → S

3366 - 2285 = ☐ → A

7632 - 2293 = ☐ → P

7406 - 4952 = ☐ → Y

11294 - 4812 = ☐ → O

7815 - 4049 = ☐ → E

7149 - 2803 = ☐ → I

9245 - 4788 = ☐ → T

11145 - 3120 = ☐ → H

10883 - 4736 = ☐ → U

6842 - 3191 = ☐ → B

10134 - 1610 = ☐ → G

6514 - 2006 = ☐ → D

4050 - 2043 = ☐ → N

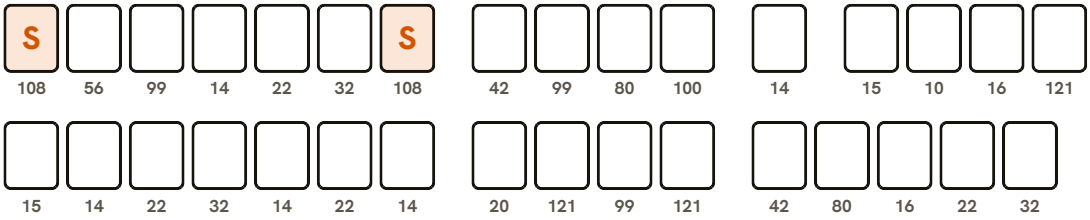
6795 - 1828 = ☐ → R

Scratch space:

CLUE 4 Multiplication facts (1-12)

> Scout Nora counted the equal rows of rescue flares to unlock the hidden code box.

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



9 × 12 = ☐ → S	8 × 4 = ☐ → D	11 × 9 = ☐ → R	
2 × 7 = ☐ → A	10 × 2 = ☐ → W	8 × 10 = ☐ → O	
11 × 2 = ☐ → N	6 × 7 = ☐ → F	10 × 10 = ☐ → M	
11 × 11 = ☐ → E	7 × 8 = ☐ → T	1 × 10 = ☐ → L	
2 × 8 = ☐ → U	3 × 5 = ☐ → B		

Scratch space:

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

> The crew shared the remaining energy bars equally among all five base camps to reveal the final answer.

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:

16 ÷ 2 = ☐ | 40 ÷ 10 = ☐ | 72 ÷ 8 = ☐ | 20 ÷ 4 = ☐ | 9 ÷ 9 = ☐

60 ÷ 10 = ☐ | 63 ÷ 9 = ☐ | 55 ÷ 5 = ☐ | 120 ÷ 10 = ☐ | 100 ÷ 10 = ☐

8 ÷ 4 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain strided over the mud, then read a pocket compass.
2. The villain dashed across the dunes, then checked a dusty map.
3. The villain dashed across the dunes, then sounded a loud horn.
4. The villain glided over the reef, then read a pocket compass.
5. The villain dived into the lagoon, then sounded a loud horn.
6. The villain glided over the reef, then checked a dusty map.
7. The villain dashed across the dunes, then dropped a bright flare.
8. The villain swung across the canyon, then checked a dusty map.
9. The villain glided over the reef, then unfolded a rope ladder.
10. The villain strided over the mud, then sounded a loud horn.
11. The villain dived into the lagoon, then dropped a bright flare.
12. The villain strided over the mud, then dropped a bright flare.

TEACHER / PARENT

Answer Key

The Sunken Compass Mystery

Culprit: Outrider Ava

SAND SKIMMER · SIGNAL HORN · RIGHT HANDED · BLUE BANDANA · CITRUS SPRAY

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

Clue 1 (Addition): "THE VILLAIN DOES NOT CARRY A SMOKE FLARE"

3690 + 4048 = 7738 (T) · 2821 + 3729 = 6550 (O) · 686 + 1560 = 2246 (L) · 2258 + 3006 = 5264 (C) · 2169 + 3618 = 5787 (S) · 2000 + 2551 = 4551 (Y) · 2192 + 2472 = 4664 (I) · 4015 + 2296 = 6311 (R) · 1829 + 4148 = 5977 (D) · 4887 + 4661 = 9548 (N) · 2964 + 5508 = 8472 (K) · 1266 + 1308 = 2574 (H) · 1212 + 2333 = 3545 (F) · 1367 + 772 = 2139 (A) · 2507 + 3597 = 6104 (M) · 2971 + 1737 = 4708 (V) · 5130 + 4350 = 9480 (E)

Clue 2 (Rounding): "RIGHT HAND PRINTS WERE LEFT ON THE CHEST"

Round 169 to the nearest ten = 170 (R) · Round 5,083 to the nearest thousand = 5000 (W) · Round 4,294 to the nearest hundred = 4300 (G) · Round 23 to the nearest ten = 20 (P) · Round 289 to the nearest ten = 290 (E) · Round 7,122 to the nearest thousand = 7000 (F) · Round 2,925 to the nearest hundred = 2900 (S) · Round 231 to the nearest hundred = 200 (H) · Round 1,744 to the nearest hundred = 1700 (A) · Round 2,421 to the nearest thousand = 2000 (O) · Round 88 to the nearest ten = 90 (N) · Round 514 to the nearest hundred = 500 (T) · Round 229 to the nearest ten = 230 (D) · Round 130 to the nearest ten = 130 (C) · Round 3,716 to the nearest hundred = 3700 (L) · Round 2,335 to the nearest hundred = 2300 (I)

Clue 3 (Subtraction): "CITRUS SPRAY STOPPED THE DASHING BANDIT"

4216 - 2078 = 2138 (C) · 2289 - 401 = 1888 (S) · 3366 - 2285 = 1081 (A) · 7632 - 2293 = 5339 (P) · 7406 - 4952 = 2454 (Y) · 11294 - 4812 = 6482 (O) · 7815 - 4049 = 3766 (E) · 7149 - 2803 = 4346 (I) · 9245 - 4788 = 4457 (T) · 11145 - 3120 = 8025 (H) · 10883 - 4736 = 6147 (U) · 6842 - 3191 = 3651 (B) · 10134 - 1610 = 8524 (G) · 6514 - 2006 = 4508 (D) · 4050 - 2043 = 2007 (N) · 6795 - 1828 = 4967 (R)

Clue 4 (Multiplication facts (1-12)): "STRANDS FROM A BLUE BANDANA WERE FOUND"

9 × 12 = 108 (S) · 8 × 4 = 32 (D) · 11 × 9 = 99 (R) · 2 × 7 = 14 (A) · 10 × 2 = 20 (W) · 8 × 10 = 80 (O) · 11 × 2 = 22 (N) · 6 × 7 = 42 (F) · 10 × 10 = 100 (M) · 11 × 11 = 121 (E) · 7 × 8 = 56 (T) · 1 × 10 = 10 (L) · 2 × 8 = 16 (U) · 3 × 5 = 15 (B)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Outrider Ava

16 ÷ 2 = 8 · 40 ÷ 10 = 4 · 72 ÷ 8 = 9 · 20 ÷ 4 = 5 · 9 ÷ 9 = 1 · 60 ÷ 10 = 6 · 63 ÷ 9 = 7 · 55 ÷ 5 = 11 · 120 ÷ 10 = 12 · 100 ÷ 10 = 10 · 8 ÷ 4 = 2