The Mystery of the Sunken Compass

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

Detective: _____ **Date:** _____

Someone swiped the ancient Golden Compass right out of Captain Barnaby map tent! Follow the clues around Starfish Cove to unmask the thief before they set sail.

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 Sneaky Scoundrel is _____

Possible suspects

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

NAME	MAIN GADGET	ESCAPE VEHICLE	HANDEDNESS	BANDANA COLOR	SOGGY FEAR
Wave Winslow	Hook Launcher	Speed Rowboat	Right Handed	Blue Bandana	Sticky Honey
Pebble Pete	Metal Detector	Wooden Raft	Right Handed	Red Bandana	Sticky Honey
Marina Finch	Smoke Bomb	Wooden Raft	Left Handed	Blue Bandana	Loud Whistles
Captain Coral	Pocket Telescope	Speed Rowboat	Right Handed	Red Bandana	Bright Flares
Breeze Bailey	Smoke Bomb	Speed Rowboat	Left Handed	Red Bandana	Loud Whistles
Clipper West	Smoke Bomb	Wooden Raft	Left Handed	Blue Bandana	Bright Flares
Salty Sam	Smoke Bomb	Zipline Harness	Right Handed	Blue Bandana	Bright Flares
Fisher Frank	Grappling Rope	Wooden Raft	Left Handed	Blue Bandana	Bright Flares
Anchor Andy	Hook Launcher	Wooden Raft	Left Handed	Blue Bandana	Sticky Honey
Rudder Ruth	Hook Launcher	Speed Rowboat	Left Handed	Blue Bandana	Bright Flares
Beacon Bob	Pocket Telescope	Wooden Raft	Right Handed	Gold Bandana	Loud Whistles
Reef Riley	Pocket Telescope	Zipline Harness	Left Handed	Red Bandana	Loud Whistles
Piper Plum	Pocket Telescope	Flying Glider	Left Handed	Blue Bandana	Bright Flares
Cobalt Cole	Grappling Rope	Speed Rowboat	Left Handed	Blue Bandana	Sticky Honey
Harbor Holly	Pocket Telescope	Wooden Raft	Left Handed	Red Bandana	Bright Flares
Barnaby Blake	Metal Detector	Flying Glider	Right Handed	Blue Bandana	Sticky Honey
Gulliver Glen	Pocket Telescope	Zipline Harness	Right Handed	Blue Bandana	Loud Whistles
Sandy Shore	Hook Launcher	Coconut Cart	Left Handed	Blue Bandana	Bright Flares
Tide Trevor	Grappling Rope	Coconut Cart	Left Handed	Gold Bandana	Sticky Honey
Shellie Shark	Pocket Telescope	Wooden Raft	Right Handed	Red Bandana	Bright Flares
Jolly Jasper	Pocket Telescope	Speed Rowboat	Right Handed	Blue Bandana	Loud Whistles

CLUE 1 Addition

You tally up all the brass doubloons left near the map table to see where the suspect stepped.

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



2573 + 2839 = ☐ → T

979 + 1774 = ☐ → R

832 + 1573 = ☐ → Y

3188 + 2439 = ☐ → U

2630 + 2999 = ☐ → N

5900 + 3376 = ☐ → L

3318 + 4497 = ☐ → O

1276 + 1282 = ☐ → G

2659 + 5886 = ☐ → S

4405 + 2954 = ☐ → A

5470 + 3782 = ☐ → D

2074 + 3732 = ☐ → I

4588 + 2625 = ☐ → E

1402 + 2887 = ☐ → V

3739 + 3617 = ☐ → F

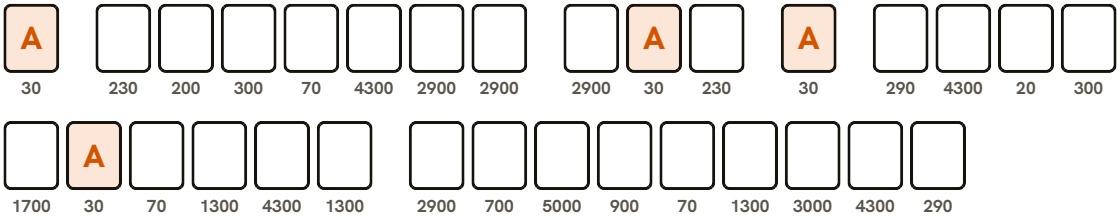
1677 + 1449 = ☐ → H

Scratch space:

CLUE 2 Rounding

The lookout tower radar rounds the island distances to the nearest ten yards to track the escape route.

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



Round 27 to the nearest ten ☐ → A

Round 2,925 to the nearest hundred ☐ → S

Round 17 to the nearest ten ☐ → F

Round 4,877 to the nearest thousand ☐ → O

Round 343 to the nearest hundred ☐ → T

Round 685 to the nearest hundred ☐ → C

Round 868 to the nearest hundred ☐ → U

Round 73 to the nearest ten ☐ → N

Round 1,708 to the nearest hundred ☐ → H

Round 4,288 to the nearest hundred ☐ → E

Round 286 to the nearest ten ☐ → L

Round 233 to the nearest ten ☐ → W

Round 1,267 to the nearest hundred ☐ → D

Round 159 to the nearest hundred ☐ → I

Round 3,225 to the nearest thousand ☐ → R

Scratch space:

CLUE 3 Subtraction

You compare the total supplies in the storage chest before and after the robbery to find missing gear.

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



5026 - 3843 = ☐ → B

7333 - 4257 = ☐ → Y

8999 - 4606 = ☐ → D

11184 - 3146 = ☐ → R

9350 - 2216 = ☐ → L

8724 - 2573 = ☐ → E

10702 - 3644 = ☐ → S

11251 - 2872 = ☐ → V

4739 - 2666 = ☐ → N

4985 - 3696 = ☐ → T

5608 - 495 = ☐ → H

3290 - 470 = ☐ → G

5235 - 2693 = ☐ → C

12780 - 4311 = ☐ → A

6913 - 3 = ☐ → I

8659 - 3677 = ☐ → W

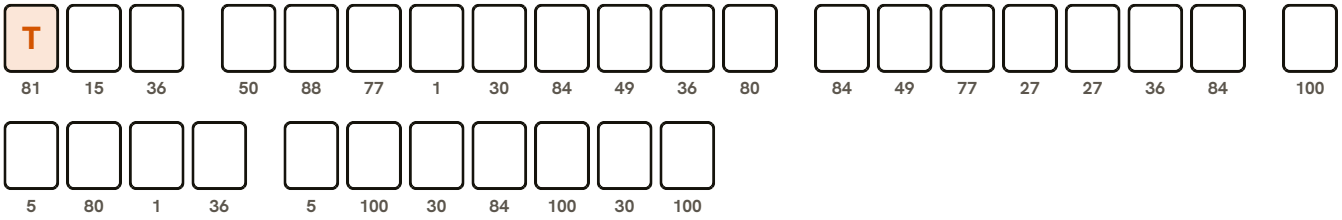
4831 - 1459 = ☐ → F

Scratch space:

CLUE 4 Multiplication facts (1-12)

> You count equal stacks of tropical fruit crates lined up in rows near the dock.

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



9 × 9 = ☐ → T	3 × 10 = ☐ → N	7 × 7 = ☐ → R	1 × 1 = ☐ → U
5 × 10 = ☐ → S	12 × 3 = ☐ → E	10 × 10 = ☐ → A	
10 × 8 = ☐ → L	8 × 11 = ☐ → C	1 × 5 = ☐ → B	
3 × 5 = ☐ → H	7 × 11 = ☐ → O	12 × 7 = ☐ → D	
9 × 3 = ☐ → P			

Scratch space:

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

> You split the island rescue rations equally among the search teams heading into the jungle.

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:

10 ÷ 1 = ☐	7 ÷ 7 = ☐	60 ÷ 12 = ☐	35 ÷ 5 = ☐	45 ÷ 5 = ☐
12 ÷ 1 = ☐	20 ÷ 5 = ☐	44 ÷ 4 = ☐	66 ÷ 11 = ☐	24 ÷ 12 = ☐
18 ÷ 6 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain used a hook launcher, then paddled a speed rowboat.
2. The villain swung on a grappling rope, then zipped away on a zipline harness.
3. The villain spied through a pocket telescope, then rolled off in a coconut cart.
4. The villain threw a smoke bomb, then rolled off in a coconut cart.
5. The villain threw a smoke bomb, then escaped on a wooden raft.
6. The villain scanned with a metal detector, then zipped away on a zipline harness.
7. The villain scanned with a metal detector, then soared off on a flying glider.
8. The villain swung on a grappling rope, then escaped on a wooden raft.
9. The villain swung on a grappling rope, then rolled off in a coconut cart.
10. The villain used a hook launcher, then rolled off in a coconut cart.
11. The villain spied through a pocket telescope, then escaped on a wooden raft.
12. The villain spied through a pocket telescope, then zipped away on a zipline harness.

TEACHER / PARENT

Answer Key

The Mystery of the Sunken Compass

Culprit: Fisher Frank

Grappling Rope · Wooden Raft · Left Handed · Blue Bandana · Bright Flares

Trail: Start 21 → Clue 1 19 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DID NOT USE A FLYING GLIDER"

2573 + 2839 = 5412 (T) · 979 + 1774 = 2753 (R) · 832 + 1573 = 2405 (Y) · 3188 + 2439 = 5627 (U) · 2630 + 2999 = 5629 (N) · 5900 + 3376 = 9276 (L) · 3318 + 4497 = 7815 (O) · 1276 + 1282 = 2558 (G) · 2659 + 5886 = 8545 (S) · 4405 + 2954 = 7359 (A) · 5470 + 3782 = 9252 (D) · 2074 + 3732 = 5806 (I) · 4588 + 2625 = 7213 (E) · 1402 + 2887 = 4289 (V) · 3739 + 3617 = 7356 (F) · 1677 + 1449 = 3126 (H)

Clue 2 (Rounding): "A WITNESS SAW A LEFT HANDED SCOUNDREL"

Round 27 to the nearest ten = 30 (A) · Round 2,925 to the nearest hundred = 2900 (S) · Round 17 to the nearest ten = 20 (F) · Round 4,877 to the nearest thousand = 5000 (O) · Round 343 to the nearest hundred = 300 (T) · Round 685 to the nearest hundred = 700 (C) · Round 868 to the nearest hundred = 900 (U) · Round 73 to the nearest ten = 70 (N) · Round 1,708 to the nearest hundred = 1700 (H) · Round 4,288 to the nearest hundred = 4300 (E) · Round 286 to the nearest ten = 290 (L) · Round 233 to the nearest ten = 230 (W) · Round 1,267 to the nearest hundred = 1300 (D) · Round 159 to the nearest hundred = 200 (I) · Round 3,225 to the nearest thousand = 3000 (R)

Clue 3 (Subtraction): "BRIGHT FLARES SCARED THE VILLAIN AWAY"

5026 - 3843 = 1183 (B) · 7333 - 4257 = 3076 (Y) · 8999 - 4606 = 4393 (D) · 11184 - 3146 = 8038 (R) · 9350 - 2216 = 7134 (L) · 8724 - 2573 = 6151 (E) · 10702 - 3644 = 7058 (S) · 11251 - 2872 = 8379 (V) · 4739 - 2666 = 2073 (N) · 4985 - 3696 = 1289 (T) · 5608 - 495 = 5113 (H) · 3290 - 470 = 2820 (G) · 5235 - 2693 = 2542 (C) · 12780 - 4311 = 8469 (A) · 6913 - 3 = 6910 (I) · 8659 - 3677 = 4982 (W) · 4831 - 1459 = 3372 (F)

Clue 4 (Multiplication facts (1-12)): "THE SCOUNDREL DROPPED A BLUE BANDANA"

9 × 9 = 81 (T) · 3 × 10 = 30 (N) · 7 × 7 = 49 (R) · 1 × 1 = 1 (U) · 5 × 10 = 50 (S) · 12 × 3 = 36 (E) · 10 × 10 = 100 (A) · 10 × 8 = 80 (L) · 8 × 11 = 88 (C) · 1 × 5 = 5 (B) · 3 × 5 = 15 (H) · 7 × 11 = 77 (O) · 12 × 7 = 84 (D) · 9 × 3 = 27 (P)

Clue 5 (Division facts (1-12)): surviving statement is box 8 → Fisher Frank

10 ÷ 1 = 10 · 7 ÷ 7 = 1 · 60 ÷ 12 = 5 · 35 ÷ 5 = 7 · 45 ÷ 5 = 9 · 12 ÷ 1 = 12 · 20 ÷ 5 = 4 · 44 ÷ 4 = 11 · 66 ÷ 11 = 6 · 24 ÷ 12 = 2 · 18 ÷ 6 = 3