The Case of the Missing Golden Compass

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

Detective: _____ **Date:** _____

The famous Golden Compass has vanished from the harbor master vault at Salty Cutlass Cove! A rogue pirate snuck aboard after dark. Inspect the clues to catch the rascal.

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 bandit is _____

Possible suspects

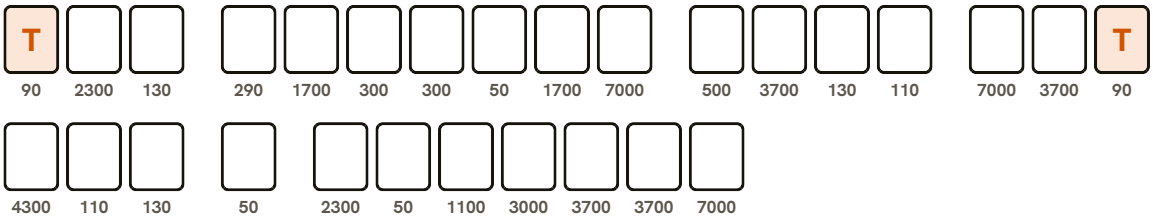
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PIRATE TOOL	SHIP WEAPON	STANCE	BEARD STYLE	FEAR
Wave Rider Wendy	Grappling Hook	Smoke Bomb	Left-Handed	Clean Shaven	Parrot Screeches
Deckhand Daisy	Brass Compass	Catapult	Left-Handed	Clean Shaven	Ticklish Feathers
Reef Runner Ray	Cutlass	Smoke Bomb	Left-Handed	Bushy Beard	Parrot Screeches
Blackbeard Barnaby	Wooden Peg	Cannon	Right-Handed	Clean Shaven	Sea Monster Tales
Scupper Scott	Cutlass	Smoke Bomb	Right-Handed	Bushy Beard	Parrot Screeches
Cannonball Kate	Grappling Hook	Harpoon	Right-Handed	Bushy Beard	Parrot Screeches
Sailor Sally	Spyglass	Net Launcher	Left-Handed	Braided Beard	Parrot Screeches
Jolly Jonah	Cutlass	Smoke Bomb	Left-Handed	Bushy Beard	Sea Monster Tales
Gunner Grace	Grappling Hook	Smoke Bomb	Right-Handed	Clean Shaven	Parrot Screeches
Rudder Ricky	Spyglass	Catapult	Right-Handed	Bushy Beard	Ticklish Feathers
Mariner Mary	Cutlass	Catapult	Left-Handed	Bushy Beard	Parrot Screeches
Calico Clara	Wooden Peg	Net Launcher	Left-Handed	Bushy Beard	Ticklish Feathers
Breeze Morgan	Spyglass	Harpoon	Right-Handed	Clean Shaven	Sea Monster Tales
Pegleg Pete	Grappling Hook	Cannon	Left-Handed	Bushy Beard	Parrot Screeches
Anchor Anne	Spyglass	Net Launcher	Right-Handed	Braided Beard	Ticklish Feathers
Captain Coral	Spyglass	Cannon	Left-Handed	Bushy Beard	Parrot Screeches
Harbor Hank	Cutlass	Harpoon	Right-Handed	Bushy Beard	Parrot Screeches
Skiff Redbeard	Spyglass	Harpoon	Left-Handed	Bushy Beard	Sea Monster Tales
Tide Tracker Tom	Grappling Hook	Cannon	Left-Handed	Braided Beard	Parrot Screeches
Barnacle Bob	Wooden Peg	Net Launcher	Right-Handed	Bushy Beard	Ticklish Feathers
First Mate Finn	Cutlass	Harpoon	Left-Handed	Bushy Beard	Parrot Screeches

CLUE 1 Rounding

> The quartermaster checked the compass dial, but the worn glass only showed numbers rounded to the nearest hundred.

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



Round 86 to the nearest ten ☐ → **T**

Round 3,655 to the nearest hundred ☐ → **O**

Round 320 to the nearest hundred ☐ → **L**

Round 2,307 to the nearest hundred ☐ → **H**

Round 1,085 to the nearest hundred ☐ → **R**

Round 2,514 to the nearest thousand ☐ → **P**

Round 110 to the nearest ten ☐ → **S**

Round 6,915 to the nearest thousand ☐ → **N**

Round 134 to the nearest ten ☐ → **E**

Round 292 to the nearest ten ☐ → **V**

Round 4,315 to the nearest hundred ☐ → **U**

Round 1,685 to the nearest hundred ☐ → **I**

Round 48 to the nearest ten ☐ → **A**

Round 539 to the nearest hundred ☐ → **D**

Scratch space:

CLUE 2

Addition

The deckhands tallied up all the stolen doubloons collected from the three lower cabins.

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



1948 + 2546 = ☐ → T	2398 + 2855 = ☐ → P	2027 + 1186 = ☐ → L
3723 + 3613 = ☐ → M	1019 + 1876 = ☐ → F	1887 + 4345 = ☐ → G
4979 + 4658 = ☐ → O	5318 + 2963 = ☐ → D	2850 + 2910 = ☐ → R
3782 + 3343 = ☐ → I	1741 + 2121 = ☐ → H	1609 + 3179 = ☐ → W
4150 + 3026 = ☐ → A	3792 + 1997 = ☐ → N	3110 + 3649 = ☐ → E
1734 + 1051 = ☐ → U		

Scratch space:

CLUE 3 Subtraction

The ship doctor calculated how many sea biscuits were taken from the pantry barrel.

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



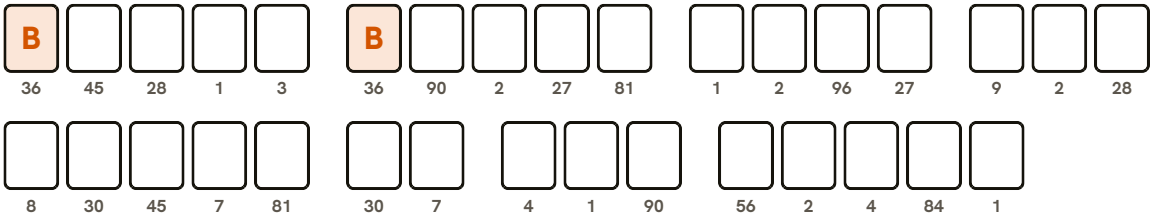
10028 - 4219 = ☐ → L	7005 - 921 = ☐ → P	2583 - 19 = ☐ → U
9101 - 2522 = ☐ → H	5839 - 2973 = ☐ → G	2507 - 1184 = ☐ → N
5499 - 4225 = ☐ → M	9837 - 3095 = ☐ → R	6512 - 3892 = ☐ → S
4716 - 1297 = ☐ → D	5594 - 2024 = ☐ → T	4105 - 1837 = ☐ → A
4991 - 1544 = ☐ → E	9443 - 3005 = ☐ → O	9523 - 2169 = ☐ → C

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The spotter counted equal rows of cannonballs stacked along the gun deck.

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



12 × 3 = ☐ → B	8 × 7 = ☐ → L	1 × 1 = ☐ → H	
9 × 10 = ☐ → E	9 × 3 = ☐ → R	1 × 2 = ☐ → A	9 × 9 = ☐ → D
1 × 3 = ☐ → Y	2 × 2 = ☐ → T	10 × 3 = ☐ → O	
8 × 12 = ☐ → I	7 × 1 = ☐ → N	1 × 9 = ☐ → W	2 × 4 = ☐ → F
9 × 5 = ☐ → U	7 × 4 = ☐ → S	7 × 12 = ☐ → C	

Scratch space:

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

> The lookout shared the recovered silver coins equally among the crew mates.

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:

24 ÷ 8 = ☐	100 ÷ 10 = ☐	45 ÷ 5 = ☐	33 ÷ 3 = ☐	7 ÷ 7 = ☐
24 ÷ 12 = ☐	120 ÷ 10 = ☐	50 ÷ 10 = ☐	24 ÷ 3 = ☐	77 ÷ 11 = ☐
28 ÷ 7 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain crawled along the anchor chain, then threw a heavy anchor.
2. The villain sneaked through the porthole, then fired a wide net launcher.
3. The villain swung across on a rope, then fired a loud cannon.
4. The villain picked the vault lock, then fired a loud cannon.
5. The villain sneaked through the porthole, then launched a heavy catapult.
6. The villain picked the vault lock, then fired a wide net launcher.
7. The villain sneaked through the porthole, then threw a heavy anchor.
8. The villain scaled the wooden hull, then threw a heavy anchor.
9. The villain picked the vault lock, then launched a heavy catapult.
10. The villain sneaked through the porthole, then fired a loud cannon.
11. The villain scaled the wooden hull, then fired a wide net launcher.
12. The villain crawled along the anchor chain, then fired a loud cannon.

TEACHER / PARENT

Answer Key

The Case of the Missing Golden Compass

Culprit: Reef Runner Ray

Cutlass · Smoke Bomb · Left-Handed · Bushy Beard · Parrot Screeches

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 7 → Clue 4 4 → Clue 5 1

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

Round 86 to the nearest ten = 90 (T) · Round 3,655 to the nearest hundred = 3700 (O) · Round 320 to the nearest hundred = 300 (L) · Round 2,307 to the nearest hundred = 2300 (H) · Round 1,085 to the nearest hundred = 1100 (R) · Round 2,514 to the nearest thousand = 3000 (P) · Round 110 to the nearest ten = 110 (S) · Round 6,915 to the nearest thousand = 7000 (N) · Round 134 to the nearest ten = 130 (E) · Round 292 to the nearest ten = 290 (V) · Round 4,315 to the nearest hundred = 4300 (U) · Round 1,685 to the nearest hundred = 1700 (I) · Round 48 to the nearest ten = 50 (A) · Round 539 to the nearest hundred = 500 (D)

Clue 2 (Addition): "THE ROGUE DREW THEIR MAP WITH THE LEFT HAND"

1948 + 2546 = 4494 (T) · 2398 + 2855 = 5253 (P) · 2027 + 1186 = 3213 (L) · 3723 + 3613 = 7336 (M) · 1019 + 1876 = 2895 (F) · 1887 + 4345 = 6232 (G) · 4979 + 4658 = 9637 (O) · 5318 + 2963 = 8281 (D) · 2850 + 2910 = 5760 (R) · 3782 + 3343 = 7125 (I) · 1741 + 2121 = 3862 (H) · 1609 + 3179 = 4788 (W) · 4150 + 3026 = 7176 (A) · 3792 + 1997 = 5789 (N) · 3110 + 3649 = 6759 (E) · 1734 + 1051 = 2785 (U)

Clue 3 (Subtraction): "LOUD PARROT SCREECHES MADE THE ROGUE RUN"

10028 - 4219 = 5809 (L) · 7005 - 921 = 6084 (P) · 2583 - 19 = 2564 (U) · 9101 - 2522 = 6579 (H) · 5839 - 2973 = 2866 (G) · 2507 - 1184 = 1323 (N) · 5499 - 4225 = 1274 (M) · 9837 - 3095 = 6742 (R) · 6512 - 3892 = 2620 (S) · 4716 - 1297 = 3419 (D) · 5594 - 2024 = 3570 (T) · 4105 - 1837 = 2268 (A) · 4991 - 1544 = 3447 (E) · 9443 - 3005 = 6438 (O) · 9523 - 2169 = 7354 (C)

Clue 4 (Multiplication facts (1-12)): "BUSHY BEARD HAIR WAS FOUND ON THE LATCH"

12 × 3 = 36 (B) · 8 × 7 = 56 (L) · 1 × 1 = 1 (H) · 9 × 10 = 90 (E) · 9 × 3 = 27 (R) · 1 × 2 = 2 (A) · 9 × 9 = 81 (D) · 1 × 3 = 3 (Y) · 2 × 2 = 4 (T) · 10 × 3 = 30 (O) · 8 × 12 = 96 (I) · 7 × 1 = 7 (N) · 1 × 9 = 9 (W) · 2 × 4 = 8 (F) · 9 × 5 = 45 (U) · 7 × 4 = 28 (S) · 7 × 12 = 84 (C)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Reef Runner Ray

24 ÷ 8 = 3 · 100 ÷ 10 = 10 · 45 ÷ 5 = 9 · 33 ÷ 3 = 11 · 7 ÷ 7 = 1 · 24 ÷ 12 = 2 · 120 ÷ 10 = 12 · 50 ÷ 10 = 5 · 24 ÷ 3 = 8 · 77 ÷ 11 = 7 · 28 ÷ 7 = 4