



The Lost Treasure of Cutlass Cay

Grade 10 math · Fractions of a number, Word problems, Rounding, Pythagorean theorem · Reading level grades 7-9

Detective: _____ **Date:** _____

The Harbormaster's legendary golden compass has been stolen right out of his locked desk! A shady rebel captain was seen slipping away from the docks into the foggy night. You must piece together the navigation logs and crew roster to unmask the thief before they sail beyond the horizon.

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 rebel captain is _____

Possible suspects

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

NAME	SIGNATURE WEAPON	SAILING GEAR	STEERING HAND	BANDANA COLOR	PHOBIA
Charlotte de Berry	Heavy Cutlass	Grappling Hook	Left Handed	Emerald Bandana	Fear of Depths
Jean Laffite	Flintlock Pistol	Pegleg Holster	Left Handed	Midnight Bandana	Fear of Storms
Blackbeard	Heavy Cutlass	Compass Charm	Left Handed	Emerald Bandana	Fear of Rats
Jacquotte Delahaye	Boarding Axe	Pegleg Holster	Right Handed	Emerald Bandana	Fear of Storms
Benjamin Hornigold	Dual Daggers	Compass Charm	Right Handed	Crimson Bandana	Fear of Rats
Samuel Bellamy	Dual Daggers	Leather Eyepatch	Left Handed	Emerald Bandana	Fear of Storms
Sadie Farrell	Flintlock Pistol	Compass Charm	Left Handed	Crimson Bandana	Fear of Rats
Grace O Malley	Brass Spyglass	Golden Pocketwatch	Left Handed	Emerald Bandana	Fear of Depths
Thomas Tew	Boarding Axe	Leather Eyepatch	Right Handed	Emerald Bandana	Fear of Storms
Howell Davis	Brass Spyglass	Compass Charm	Left Handed	Midnight Bandana	Fear of Depths
Bartholomew Roberts	Heavy Cutlass	Leather Eyepatch	Right Handed	Crimson Bandana	Fear of Depths
Mary Read	Boarding Axe	Pegleg Holster	Right Handed	Midnight Bandana	Fear of Rats
Stede Bonnet	Brass Spyglass	Grappling Hook	Left Handed	Emerald Bandana	Fear of Rats
Anne Bonny	Brass Spyglass	Leather Eyepatch	Left Handed	Crimson Bandana	Fear of Rats
Edward Low	Dual Daggers	Golden Pocketwatch	Right Handed	Emerald Bandana	Fear of Storms
Charles Vane	Heavy Cutlass	Leather Eyepatch	Left Handed	Midnight Bandana	Fear of Storms
Rachel Wall	Flintlock Pistol	Leather Eyepatch	Right Handed	Crimson Bandana	Fear of Storms
Edward England	Dual Daggers	Leather Eyepatch	Right Handed	Emerald Bandana	Fear of Storms
L orangeois	Heavy Cutlass	Pegleg Holster	Right Handed	Crimson Bandana	Fear of Rats
Calico Jack	Brass Spyglass	Pegleg Holster	Right Handed	Emerald Bandana	Fear of Storms
Francis Drake	Flintlock Pistol	Leather Eyepatch	Right Handed	Emerald Bandana	Fear of Depths

CLUE 1

Fractions of a number

The Quartermaster tracks the cargo crates loaded onto the ship, but some math is needed to find the hidden slip.

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

T																	
32	26	43	22	31	58	25	25	60	44	58	49	25	58	31	12	22	58
											T			T			
49	24	25	36	43	3	50	24	31	12	43	32	44	58	32	31	26	

$1/4$ of 128 = → T	$2/5$ of 150 = → Y	$2/4$ of 72 = → D
$2/8$ of 100 = → L	$4/5$ of 55 = → W	$4/10$ of 145 = → A
$3/6$ of 86 = → E	$6/8$ of 32 = → O	$2/8$ of 196 = → G
$1/2$ of 6 = → N	$4/8$ of 44 = → S	$2/6$ of 78 = → H
$5/10$ of 100 = → P	$1/6$ of 72 = → K	$2/6$ of 93 = → C

Scratch space:

CLUE 2

Word problems

We found a torn logbook page showing only a fraction of the gold coins spent at the port.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

R									D	E	D
84	79	27	26	100	26	56	12				

There were 88 sea biscuits. 4 were used up. How many sea biscuits are left?

Answer: → **R**

There were 61 rum barrels. 35 were used up. How many rum barrels are left?

Answer: → **H**

Quartermaster found 37 iron cannons yesterday and 19 more today. How many iron cannons in all?

Answer: → **A**

Quartermaster lined up 3 rows of 9 iron cannons. How many iron cannons in all?

Answer: → **G**

Quartermaster lined up 10 rows of 10 doubloons. How many doubloons in all?

Answer: → **T**

Quartermaster lined up 3 rows of 4 iron cannons. How many iron cannons in all?

Answer: → **N**

Quartermaster found 2 doubloons yesterday and 77 more today. How many doubloons in all?

Answer: → **I**

Scratch space:

CLUE 3
Rounding

The ship's old mechanical depth gauge only registers whole leagues, requiring us to round the readings.

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

T					T													T
9000	30	1300	700	430	9000	500	3700	110	290	700	110	1300	130	1300	2000	3700	9000	
T											T							
9000	30	1300	370	700	430	4300	2000	700	900	9000	30	430	4300	2000	1300	130		

Round 8,942 to the nearest thousand → **T**

Round 4,306 to the nearest hundred → **N**

Round 427 to the nearest ten → **U**

Round 933 to the nearest hundred → **F**

Round 30 to the nearest ten → **H**

Round 129 to the nearest ten → **R**

Round 368 to the nearest ten → **S**

Round 290 to the nearest ten → **C**

Round 107 to the nearest ten → **W**

Round 3,675 to the nearest hundred → **A**

Round 732 to the nearest hundred → **O**

Round 2,409 to the nearest thousand → **D**

Round 469 to the nearest hundred → **L**

Round 1,326 to the nearest hundred → **E**

Scratch space:

CLUE 4
Pythagorean theorem

We map the distance from the tall lighthouse to the anchored flagship using right triangles.

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

A																	
116	87	125	15	50	111	51	50	125	52	52	68	30	51	125	116	37	
	A			A													
65	116	30	51	116	68	50	100	52	26	15	68	51	111	52	68	52	51

legs 80 and 84, hypotenuse = → **A**

legs 25 and 60, hypotenuse = → **W**

legs 32 and 60, hypotenuse = → **N**

legs 24 and 45, hypotenuse = → **T**

legs 12 and 35, hypotenuse = → **P**

legs 30 and 40, hypotenuse = → **G**

legs 28 and 96, hypotenuse = → **L**

legs 20 and 48, hypotenuse = → **E**

legs 9 and 12, hypotenuse = → **I**

legs 35 and 120, hypotenuse = → **R**

legs 36 and 105, hypotenuse = → **H**

legs 10 and 24, hypotenuse = → **D**

legs 18 and 24, hypotenuse = → **S**

legs 60 and 63, hypotenuse = → **B**

Scratch space:

CLUE 5**Fractions of a number - the last clue**

A crew division chart shows exactly how many sailors got a share of the stolen silver.

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:

$3/8 \text{ of } 8 = \boxed{}$

$2/3 \text{ of } 6 = \boxed{}$

$1/10 \text{ of } 10 = \boxed{}$

$1/3 \text{ of } 33 = \boxed{}$

$1/10 \text{ of } 120 = \boxed{}$

$2/8 \text{ of } 32 = \boxed{}$

$6/10 \text{ of } 15 = \boxed{}$

$1/2 \text{ of } 10 = \boxed{}$

$2/8 \text{ of } 8 = \boxed{}$

$3/10 \text{ of } 20 = \boxed{}$

$2/3 \text{ of } 15 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain chopped with a boarding axe, then adjusted a leather eyepatch slowly.
2. The villain brandished a flintlock pistol, then adjusted a leather eyepatch slowly.
3. The villain chopped with a boarding axe, then tapped a pegleg holster on the deck.
4. The villain scouted with a brass spyglass, then tapped a pegleg holster on the deck.
5. The villain swung a heavy cutlass, then checked a golden pocketwatch.
6. The villain scouted with a brass spyglass, then slung a grappling hook over the side.
7. The villain flashed dual daggers, then adjusted a leather eyepatch slowly.
8. The villain flashed dual daggers, then slung a grappling hook over the side.
9. The villain brandished a flintlock pistol, then slung a grappling hook over the side.
10. The villain swung a heavy cutlass, then tapped a pegleg holster on the deck.
11. The villain chopped with a boarding axe, then slung a grappling hook over the side.
12. The villain brandished a flintlock pistol, then tapped a pegleg holster on the deck.

Answer Key

The Lost Treasure of Cutlass Cay

Culprit: Edward England

Dual Daggers · Leather Eyepatch · Right Handed · Emerald Bandana · Fear of Storms

Trail: Start 21 → Clue 1 19 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE SCALLYWAG LACKS A GOLDEN POCKETWATCH"

$\frac{1}{4}$ of 128 = 32 (T) · $\frac{2}{5}$ of 150 = 60 (Y) · $\frac{2}{4}$ of 72 = 36 (D) · $\frac{2}{8}$ of 100 = 25 (L) · $\frac{4}{5}$ of 55 = 44 (W) · $\frac{4}{10}$ of 145 = 58 (A) · $\frac{3}{6}$ of 86 = 43 (E) · $\frac{6}{8}$ of 32 = 24 (O) · $\frac{2}{8}$ of 196 = 49 (G) · $\frac{1}{2}$ of 6 = 3 (N) · $\frac{4}{8}$ of 44 = 22 (S) · $\frac{2}{6}$ of 78 = 26 (H) · $\frac{5}{10}$ of 100 = 50 (P) · $\frac{1}{6}$ of 72 = 12 (K) · $\frac{2}{6}$ of 93 = 31 (C)

Clue 2 (Word problems): "RIGHT HANDED"

There were 88 sea biscuits. 4 were used up. How many sea biscuits are left? = 84 (R) · There were 61 rum barrels. 35 were used up. How many rum barrels are left? = 26 (H) · Quartermaster found 37 iron cannons yesterday and 19 more today. How many iron cannons in all? = 56 (A) · Quartermaster lined up 3 rows of 9 iron cannons. How many iron cannons in all? = 27 (G) · Quartermaster lined up 10 rows of 10 doubloons. How many doubloons in all? = 100 (T) · Quartermaster lined up 3 rows of 4 iron cannons. How many iron cannons in all? = 12 (N) · Quartermaster found 2 doubloons yesterday and 77 more today. How many doubloons in all? = 79 (I)

Clue 3 (Rounding): "THE OUTLAW COWERED AT THE SOUND OF THUNDER"

Round 8,942 to the nearest thousand = 9000 (T) · Round 4,306 to the nearest hundred = 4300 (N) · Round 427 to the nearest ten = 430 (U) · Round 933 to the nearest hundred = 900 (F) · Round 30 to the nearest ten = 30 (H) · Round 129 to the nearest ten = 130 (R) · Round 368 to the nearest ten = 370 (S) · Round 290 to the nearest ten = 290 (C) · Round 107 to the nearest ten = 110 (W) · Round 3,675 to the nearest hundred = 3700 (A) · Round 732 to the nearest hundred = 700 (O) · Round 2,409 to the nearest thousand = 2000 (D) · Round 469 to the nearest hundred = 500 (L) · Round 1,326 to the nearest hundred = 1300 (E)

Clue 4 (Pythagorean theorem): "A BRIGHT GREEN STRAP WAS TANGLED IN THE NET"

legs 80 and 84, hypotenuse = 116 (A) · legs 25 and 60, hypotenuse = 65 (W) · legs 32 and 60, hypotenuse = 68 (N) · legs 24 and 45, hypotenuse = 51 (T) · legs 12 and 35, hypotenuse = 37 (P) · legs 30 and 40, hypotenuse = 50 (G) · legs 28 and 96, hypotenuse = 100 (L) · legs 20 and 48, hypotenuse = 52 (E) · legs 9 and 12, hypotenuse = 15 (I) · legs 35 and 120, hypotenuse = 125 (R) · legs 36 and 105, hypotenuse = 111 (H) · legs 10 and 24, hypotenuse = 26 (D) · legs 18 and 24, hypotenuse = 30 (S) · legs 60 and 63, hypotenuse = 87 (B)

Clue 5 (Fractions of a number): surviving statement is box 7 → Edward England

$\frac{3}{8}$ of 8 = 3 · $\frac{2}{3}$ of 6 = 4 · $\frac{1}{10}$ of 10 = 1 · $\frac{1}{3}$ of 33 = 11 · $\frac{1}{10}$ of 120 = 12 · $\frac{2}{8}$ of 32 = 8 · $\frac{6}{10}$ of 15 = 9 · $\frac{1}{2}$ of 10 = 5 · $\frac{2}{8}$ of 8 = 2 · $\frac{3}{10}$ of 20 = 6 · $\frac{2}{3}$ of 15 = 10