



The Mystery of Siren Cove

Grade 7 math · Place value, Addition, Subtraction, Multiplication, Missing addends · Reading level grades 7-9

Detective: _____ Date: _____

A rogue captain has raided the sacred vaults of Siren Cove, stealing ancient magical relics and disrupting the delicate truce between pirates and merfolk. As the chief investigator, you must use marine logs, wreckage evidence, and mathematical clues to track down the culprit before they escape across the ocean.

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 Pirate Captain is _____

Possible suspects

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

NAME	SEAFARING SKILL	STOLEN RELIC	DOMINANT HAND	HAIR COLOR	VULNERABILITY
Calico Jack	Tide Control	Enchanted Spyglass	Left Handed	Seaweed Green	Pure Iron
Thomas Tew	Compass Bending	Golden Compass	Right Handed	Seaweed Green	Pure Iron
Grace OMalley	Cannon Blasting	Pearl Shield	Left Handed	Seaweed Green	Pure Iron
Jacquotte Delahaye	Compass Bending	Pearl Shield	Right Handed	Seaweed Green	Pure Iron
Anne Bonny	Compass Bending	Golden Compass	Right Handed	Seaweed Green	Sunken Gold
Henry Morgan	Ship Sinking	Obsidian Cutlass	Left Handed	Seaweed Green	Pure Iron
Sayyida al Hurra	Ship Sinking	Pearl Shield	Right Handed	Coral Red	Fresh Water
Blackbeard	Cannon Blasting	Enchanted Spyglass	Right Handed	Midnight Black	Sunken Gold
Stede Bonnet	Tide Control	Obsidian Cutlass	Right Handed	Midnight Black	Fresh Water
Francis Drake	Tide Control	Golden Compass	Left Handed	Coral Red	Pure Iron
Zheng Yi Sao	Siren Song	Enchanted Spyglass	Right Handed	Midnight Black	Pure Iron
Charles Vane	Compass Bending	Pearl Shield	Right Handed	Seaweed Green	Fresh Water
Woodes Rogers	Cannon Blasting	Trident of Tides	Left Handed	Seaweed Green	Fresh Water
William Kidd	Tide Control	Pearl Shield	Right Handed	Seaweed Green	Fresh Water
Francois lOlonnais	Cannon Blasting	Golden Compass	Left Handed	Seaweed Green	Pure Iron
Mary Read	Siren Song	Trident of Tides	Right Handed	Coral Red	Pure Iron
Jean Lafitte	Cannon Blasting	Enchanted Spyglass	Right Handed	Coral Red	Pure Iron
Howell Davis	Compass Bending	Enchanted Spyglass	Left Handed	Seaweed Green	Sunken Gold
Charlotte de Berry	Siren Song	Trident of Tides	Left Handed	Coral Red	Sunken Gold
Edward Low	Siren Song	Trident of Tides	Left Handed	Seaweed Green	Pure Iron
Samuel Bellamy	Ship Sinking	Enchanted Spyglass	Right Handed	Midnight Black	Pure Iron

CLUE 1

The sea captain examines a coded logbook where digit positions reveal a secret naval coordinate.

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

A 2x10 grid of boxes. The top row contains the following values from left to right: 600 (with an orange 'T' in the top-left corner), 400, 200, 50, 2000, 70, 8000, 7000, 700, 600 (with an orange 'T' in the top-right corner), 300, 500, 200, 3000, 9000, 500, 600 (with an orange 'T' in the top-right corner). The bottom row contains the following values from left to right: 2000, 3000, 200, 800, 9000, 500, 5000, 3000, 700, 300, 700, 800, 9000, 50, 2000, 600 (with an orange 'T' in the top-right corner), 70, 800, 3000, 3000.

What is the value of the 6 in 52,631?

What is the value of the 5 in 115,368?



A diagram showing a box with a question mark pointing to a box with the letter B.

What is the value of the 3 in 543,464?

? $\rightarrow$ S

What is the value of the 4 in 69,419?

A diagram showing a transformation. On the left is a box containing a question mark (?). An arrow points from this box to another box on the right, which contains the letter H.

What is the value of the 7 in 114,761?

? →

What is the value of the 3 in 744,300?

? → **D**

What is the value of the 7 in 14,873?

What is the value of the 8 in 258,266?

What is the value of the 8 in 922,806?

? → **A**

What is the value of the 2 in 62,097?

→ **U**

What is the value of the 2 in 69,276?

A diagram showing a rectangular box on the left, followed by a right-pointing arrow, and then another rectangular box on the right containing the letter 'E'.

What is the value of the 7 in 207,804?

What is the value of the 5 in 27,547?

A diagram showing a box with an arrow pointing to a box containing the letter O.

What is the value of the 9 in 569,403?

A diagram showing a transition from an empty box to a box containing the letter N. An arrow points from an empty box on the left to a box containing the letter 'N' on the right.

What is the value of the 5 in 68,050?

→ **C**

Scratch space:

CLUE 2 Addition

The crew tallies up recovered barrels of gunpowder from two captured galleons to measure their total supplies.

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

A						A											A	
6704	4278	3390	8706	3296	3704	6704	2853	7542	3390	7542	3480	4515	7360	2853	3296	8615	6704	2576
										A								
4278	3390	8706	3296	4663	2853	3296	3704	3390	8731	6704	3480	3296	7360	3593	3390			
2576	3704	7360	3480															

$2282 + 4422 = \square \rightarrow \mathbf{A}$	$1629 + 2075 = \square \rightarrow \mathbf{H}$	$1988 + 2290 = \square \rightarrow \mathbf{L}$
$1284 + 2309 = \square \rightarrow \mathbf{V}$	$4889 + 3842 = \square \rightarrow \mathbf{C}$	$995 + 2301 = \square \rightarrow \mathbf{T}$
$2011 + 2504 = \square \rightarrow \mathbf{R}$	$2314 + 5228 = \square \rightarrow \mathbf{D}$	$4228 + 4387 = \square \rightarrow \mathbf{W}$
$2790 + 4570 = \square \rightarrow \mathbf{I}$	$4344 + 4362 = \square \rightarrow \mathbf{F}$	$1712 + 1141 = \square \rightarrow \mathbf{N}$
$1830 + 2833 = \square \rightarrow \mathbf{O}$	$907 + 1669 = \square \rightarrow \mathbf{S}$	$1684 + 1706 = \square \rightarrow \mathbf{E}$
$2287 + 1193 = \square \rightarrow \mathbf{P}$		

Scratch space:

CLUE 3

Subtraction

The navigator calculates how many nautical miles remain after dodging a sudden sea monster.

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

T																			
1844	4352	8660	2565	8243	5439	7560	3335	2758	6678	8660	5589	3834	5589	2815	3335	8243	4352	8660	2758

	T																		
8985	1844	8985	2565	1561	5439	6678	2758	5439	3834	1988	7560	6678	8660	2815	6678	5439	3335		

$5794 - 3950 = \square \rightarrow \boxed{\text{T}}$

$8299 - 2710 = \square \rightarrow \boxed{\text{L}}$

$10088 - 1428 = \square \rightarrow \boxed{\text{E}}$

$4005 - 1247 = \square \rightarrow \boxed{\text{D}}$

$2809 - 1248 = \square \rightarrow \boxed{\text{W}}$

$8904 - 661 = \square \rightarrow \boxed{\text{C}}$

$4305 - 970 = \square \rightarrow \boxed{\text{N}}$

$11232 - 4554 = \square \rightarrow \boxed{\text{R}}$

$9562 - 577 = \square \rightarrow \boxed{\text{A}}$

$3643 - 828 = \square \rightarrow \boxed{\text{I}}$

$7786 - 2347 = \square \rightarrow \boxed{\text{O}}$

$4722 - 370 = \square \rightarrow \boxed{\text{H}}$

$5809 - 3821 = \square \rightarrow \boxed{\text{P}}$

$4484 - 650 = \square \rightarrow \boxed{\text{F}}$

$2752 - 187 = \square \rightarrow \boxed{\text{S}}$

$12087 - 4527 = \square \rightarrow \boxed{\text{U}}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The quartermaster counts identical crates of ship supplies stacked in equal rows along the lower deck.

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

S						S			S							
108	90	77	35	33	32	108	2	44	108	14	35	120	14	14	32	
60	77	14	14	33	66	35	70	77	8	35	12	60	66	90	2	33
90	35	8	99	18	14											

$12 \times 9 = \square \rightarrow \text{S}$

$12 \times 10 = \square \rightarrow \text{W}$

$5 \times 7 = \square \rightarrow \text{A}$

$11 \times 4 = \square \rightarrow \text{F}$

$7 \times 10 = \square \rightarrow \text{I}$

$2 \times 6 = \square \rightarrow \text{U}$

$7 \times 11 = \square \rightarrow \text{R}$

$10 \times 9 = \square \rightarrow \text{T}$

$12 \times 5 = \square \rightarrow \text{G}$

$2 \times 1 = \square \rightarrow \text{O}$

$6 \times 3 = \square \rightarrow \text{L}$

$11 \times 6 = \square \rightarrow \text{H}$

$11 \times 9 = \square \rightarrow \text{K}$

$4 \times 2 = \square \rightarrow \text{C}$

$8 \times 4 = \square \rightarrow \text{D}$

$7 \times 2 = \square \rightarrow \text{E}$

$11 \times 3 = \square \rightarrow \text{N}$

Scratch space:

CLUE 5**Missing addends - the last clue**

The lookout compares the weight of plunder on the scale with the missing cargo to solve the shortfall.

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:

$7 + \underline{\quad} = 8$

$7 + \underline{\quad} = 17$

$39 + \underline{\quad} = 43$

$23 + \underline{\quad} = 26$

$8 + \underline{\quad} = 14$

$38 + \underline{\quad} = 46$

$15 + \underline{\quad} = 24$

$20 + \underline{\quad} = 25$

$7 + \underline{\quad} = 18$

$16 + \underline{\quad} = 23$

$20 + \underline{\quad} = 32$

Step 2 - cross out the sentence with each answer:

1. The villain sang a hypnotic siren song, then stole the Trident of Tides.
2. The villain summoned rogue tidal waves, then took the Enchanted Spyglass.
3. The villain bent the ships compasses, then stole the Trident of Tides.
4. The villain blasted the starboard cannons, then stole the Pearl Shield.
5. The villain summoned rogue tidal waves, then claimed the Obsidian Cutlass.
6. The villain bent the ships compasses, then stole the Pearl Shield.
7. The villain sang a hypnotic siren song, then claimed the Obsidian Cutlass.
8. The villain blasted the starboard cannons, then stole the Trident of Tides.
9. The villain blasted the starboard cannons, then took the Enchanted Spyglass.
10. The villain blasted the starboard cannons, then snatched the Golden Compass.
11. The villain bent the ships compasses, then claimed the Obsidian Cutlass.
12. The villain sang a hypnotic siren song, then took the Enchanted Spyglass.

Answer Key

The Mystery of Siren Cove

Culprit: Calico Jack

Tide Control · Enchanted Spyglass · Left Handed · Seaweed Green · Pure Iron

Trail: Start 21 → Clue 1 19 → Clue 2 8 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE CULPRIT DOES NOT USE AN OBSIDIAN CUTLASS"

What is the value of the 6 in 52,631? = 600 (T) · What is the value of the 5 in 115,368? = 5000 (B) · What is the value of the 3 in 543,464? = 3000 (S) · What is the value of the 4 in 69,419? = 400 (H) · What is the value of the 7 in 114,761? = 700 (I) · What is the value of the 3 in 744,300? = 300 (D) · What is the value of the 7 in 14,873? = 70 (L) · What is the value of the 8 in 258,266? = 8000 (P) · What is the value of the 8 in 922,806? = 800 (A) · What is the value of the 2 in 62,097? = 2000 (U) · What is the value of the 2 in 69,276? = 200 (E) · What is the value of the 7 in 207,804? = 7000 (R) · What is the value of the 5 in 27,547? = 500 (O) · What is the value of the 9 in 569,403? = 9000 (N) · What is the value of the 5 in 68,050? = 50 (C)

Clue 2 (Addition): "A LEFT HANDED PRINT WAS LEFT ON THE CAPTIVE SHIP"

2282 + 4422 = 6704 (A) · 1629 + 2075 = 3704 (H) · 1988 + 2290 = 4278 (L) · 1284 + 2309 = 3593 (V) · 4889 + 3842 = 8731 (C) · 995 + 2301 = 3296 (T) · 2011 + 2504 = 4515 (R) · 2314 + 5228 = 7542 (D) · 4228 + 4387 = 8615 (W) · 2790 + 4570 = 7360 (I) · 4344 + 4362 = 8706 (F) · 1712 + 1141 = 2853 (N) · 1830 + 2833 = 4663 (O) · 907 + 1669 = 2576 (S) · 1684 + 1706 = 3390 (E) · 2287 + 1193 = 3480 (P)

Clue 3 (Subtraction): "THE SCOUNDREL FLINCHED AT A SWORD OF PURE IRON"

5794 - 3950 = 1844 (T) · 8299 - 2710 = 5589 (L) · 10088 - 1428 = 8660 (E) · 4005 - 1247 = 2758 (D) · 2809 - 1248 = 1561 (W) · 8904 - 661 = 8243 (C) · 4305 - 970 = 3335 (N) · 11232 - 4554 = 6678 (R) · 9562 - 577 = 8985 (A) · 3643 - 828 = 2815 (I) · 7786 - 2347 = 5439 (O) · 4722 - 370 = 4352 (H) · 5809 - 3821 = 1988 (P) · 4484 - 650 = 3834 (F) · 2752 - 187 = 2565 (S) · 12087 - 4527 = 7560 (U)

Clue 4 (Multiplication facts (1-12)): "STRANDS OF SEAWEED GREEN HAIR CAUGHT ON TACKLE"

12 × 9 = 108 (S) · 12 × 10 = 120 (W) · 5 × 7 = 35 (A) · 11 × 4 = 44 (F) · 7 × 10 = 70 (I) · 2 × 6 = 12 (U) · 7 × 11 = 77 (R) · 10 × 9 = 90 (T) · 12 × 5 = 60 (G) · 2 × 1 = 2 (O) · 6 × 3 = 18 (L) · 11 × 6 = 66 (H) · 11 × 9 = 99 (K) · 4 × 2 = 8 (C) · 8 × 4 = 32 (D) · 7 × 2 = 14 (E) · 11 × 3 = 33 (N)

Clue 5 (Missing addends): surviving statement is box 2 → Calico Jack

7 + ___ = 8 = 1 · 7 + ___ = 17 = 10 · 39 + ___ = 43 = 4 · 23 + ___ = 26 = 3 · 8 + ___ = 14 = 6 · 38 + ___ = 46 = 8 · 15 + ___ = 24 = 9 · 20 + ___ = 25 = 5 · 7 + ___ = 18 = 11 · 16 + ___ = 23 = 7 · 20 + ___ = 32 = 12