



# The Mystery of Skull Cove

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

**Detective:** \_\_\_\_\_ **Date:** \_\_\_\_\_

A sneaky pirate thief has stolen the Golden Spyglass right out of the Harbor Master's desk! The docks are busy, and anyone could be the culprit. We must solve the math mysteries on the docks to catch the thief.

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 thief is** \_\_\_\_\_

## Possible suspects

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

| NAME            | FAVORITE SKILL     | LUCKY GEAR         | SIGNATURE MOVE     | HEAD STYLE     | BIG FEAR              |
|-----------------|--------------------|--------------------|--------------------|----------------|-----------------------|
| Blind Pew       | fires the cannons  | wooden pegleg      | right handed swing | red bandanna   | scared of sharks      |
| Salty Sam       | fires the cannons  | wooden pegleg      | left handed swing  | black beard    | fears tickly feathers |
| Sharky Steve    | reads ancient maps | velvet captain hat | left handed swing  | black beard    | hates sour limes      |
| Long John       | steers the galleon | golden eyepatch    | left handed swing  | black beard    | hates sour limes      |
| One Eyed Willy  | reads ancient maps | green parrot       | left handed swing  | woolen tricorn | hates sour limes      |
| Scurvy Dan      | fires the cannons  | velvet captain hat | left handed swing  | black beard    | fears tickly feathers |
| Scurvy Sid      | swings on ropes    | shiny brass hook   | left handed swing  | woolen tricorn | fears tickly feathers |
| Captain Flint   | fires the cannons  | shiny brass hook   | left handed swing  | red bandanna   | scared of sharks      |
| Patchy Pete     | reads ancient maps | golden eyepatch    | right handed swing | black beard    | scared of sharks      |
| Grace OMalley   | fires the cannons  | green parrot       | left handed swing  | black beard    | fears tickly feathers |
| Billy Bones     | fires the cannons  | golden eyepatch    | right handed swing | red bandanna   | hates sour limes      |
| Bartholomew     | swings on ropes    | shiny brass hook   | right handed swing | black beard    | hates sour limes      |
| Mary Read       | steers the galleon | green parrot       | left handed swing  | black beard    | hates sour limes      |
| Captain Barnaby | fires the cannons  | golden eyepatch    | right handed swing | black beard    | hates sour limes      |
| Pegleg Pete     | reads ancient maps | shiny brass hook   | right handed swing | black beard    | fears tickly feathers |
| Blackbeard Ben  | digs for chests    | green parrot       | left handed swing  | red bandanna   | fears tickly feathers |
| Sea Dog Sally   | fires the cannons  | shiny brass hook   | right handed swing | woolen tricorn | scared of sharks      |
| Galleon Gabe    | reads ancient maps | velvet captain hat | left handed swing  | red bandanna   | fears tickly feathers |
| Marina Wave     | digs for chests    | wooden pegleg      | right handed swing | woolen tricorn | scared of sharks      |
| Calico Jack     | steers the galleon | shiny brass hook   | left handed swing  | black beard    | fears tickly feathers |
| Captain Kid     | steers the galleon | golden eyepatch    | left handed swing  | black beard    | fears tickly feathers |

## CLUE 1 Place value

We found a secret code etched onto the dock. To read the digits in the tens place, we must find the value of the pirate crew's gold chests.

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

|    |      |    |      |      |     |    |      |      |    |    |      |      |     |      |      |     |  |  |
|----|------|----|------|------|-----|----|------|------|----|----|------|------|-----|------|------|-----|--|--|
| T  |      |    |      |      |     |    |      |      |    |    |      |      |     |      |      |     |  |  |
| 30 | 8000 | 40 | 5000 | 7000 | 300 | 90 | 4000 | 2000 | 20 | 40 | 1000 | 8000 | 600 | 5000 | 4000 | 300 |  |  |

  

|     |     |      |      |    |      |    |     |    |    |     |    |      |      |
|-----|-----|------|------|----|------|----|-----|----|----|-----|----|------|------|
|     |     |      |      |    |      |    |     |    |    |     | T  |      |      |
| 500 | 300 | 1000 | 2000 | 40 | 4000 | 40 | 400 | 40 | 50 | 600 | 30 | 7000 | 8000 |

What is the value of the 3 in 539?  → **T**

What is the value of the 6 in 2,680?  → **A**

What is the value of the 4 in 1,470?  → **Y**

What is the value of the 2 in 2,300?  → **D**

What is the value of the 4 in 6,148?  → **E**

What is the value of the 2 in 525?  → **R**

What is the value of the 7 in 67,820?  → **C**

What is the value of the 9 in 594?  → **U**

What is the value of the 4 in 74,981?  → **N**

What is the value of the 1 in 1,565?  → **L**

What is the value of the 5 in 8,582?  → **G**

What is the value of the 5 in 9,151?  → **P**

What is the value of the 8 in 8,660?  → **H**

What is the value of the 3 in 317?  → **O**

What is the value of the 5 in 5,811?  → **S**

Scratch space:

## CLUE 2

A friendly sailor says he saw someone running by. To get his full story, we need to add up the total number of coconuts dropped by the thief.

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

5386 7263 8029 8677 9275 5018 8220 8029 9363 4809 8349 9482 8492 7407 8029 3276 8029 2528 5386

7263 4809 7407 9482 8029 9482

$$2984 + 2402 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{T}}$$

$3865 + 3542 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{N}}$

$$2580 + 4683 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{H}}$$

$$4486 + 4006 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{O}}$$

$1543 + 3475 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{I}}$

$$4485 + 3864 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{S}}$$

$$2932 + 5288 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{M}}$$

$1766 + 3043 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{A}}$

$$3540 + 5735 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{R}}$$

$$3078 + 5599 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{C}}$$

$$5952 + 3411 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{W}}$$

$$3728 + 4301 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{E}}$$

$1834 + 1442 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{L}}$

$1341 + 1187 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{F}}$

$5298 + 4184 = \boxed{\phantom{0000}} \rightarrow \boxed{\text{D}}$

Scratch space:

**CLUE 3**
**Subtraction**

The ship's cook is willing to share a clue if we help him. We need to find how many fresh lemons are left after subtracting the ones eaten by the cabin boy.

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

|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| T    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 4607 | 2094 | 2908 | 5665 | 4071 | 8896 | 8896 | 2503 | 4071 | 8063 | 7053 | 2908 | 2503 | 6131 | 2194 |

|      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| T    |      |      |      |      |      |      |      |      | T    |      |      |      |      |
| 4607 | 4071 | 2385 | 6330 | 8896 | 1857 | 7053 | 2908 | 2503 | 4607 | 2094 | 2908 | 6131 | 2194 |

$9509 - 4902 = \square \rightarrow \boxed{\text{T}}$

$2128 - 271 = \square \rightarrow \boxed{\text{Y}}$

$10262 - 3209 = \square \rightarrow \boxed{\text{F}}$

$2997 - 89 = \square \rightarrow \boxed{\text{E}}$

$12621 - 3725 = \square \rightarrow \boxed{\text{L}}$

$7652 - 3581 = \square \rightarrow \boxed{\text{I}}$

$9664 - 3334 = \square \rightarrow \boxed{\text{K}}$

$9152 - 3021 = \square \rightarrow \boxed{\text{R}}$

$4422 - 2328 = \square \rightarrow \boxed{\text{H}}$

$7200 - 4815 = \square \rightarrow \boxed{\text{C}}$

$2950 - 756 = \square \rightarrow \boxed{\text{S}}$

$6146 - 481 = \square \rightarrow \boxed{\text{V}}$

$12609 - 4546 = \square \rightarrow \boxed{\text{N}}$

$6725 - 4222 = \square \rightarrow \boxed{\text{A}}$

Scratch space:

**CLUE 4**
**Multiplication facts (1-12)**

We found rows of mysterious footprints in the sand. If we multiply the rows by the prints in each row, we can uncover a hidden clue about the thief.

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

|          |     |    |    |    |     |    |    |    |    |    |    |     |     |   |   |    |    |    |
|----------|-----|----|----|----|-----|----|----|----|----|----|----|-----|-----|---|---|----|----|----|
| <b>W</b> |     |    |    |    |     |    |    |    |    |    |    |     |     |   |   |    |    |    |
| 21       | 110 | 99 | 54 | 70 | 132 | 90 | 72 | 35 | 54 | 72 | 80 | 108 | 110 | 7 | 1 | 72 | 35 | 32 |

  

|   |     |    |    |    |   |    |    |    |
|---|-----|----|----|----|---|----|----|----|
|   |     |    |    |    |   |    |    |    |
| 7 | 110 | 72 | 80 | 90 | 9 | 72 | 49 | 80 |

|                                              |                                               |                                              |                                             |
|----------------------------------------------|-----------------------------------------------|----------------------------------------------|---------------------------------------------|
| $3 \times 7 = \square \rightarrow$ <b>W</b>  | $12 \times 11 = \square \rightarrow$ <b>N</b> | $1 \times 9 = \square \rightarrow$ <b>H</b>  |                                             |
| $8 \times 10 = \square \rightarrow$ <b>R</b> | $9 \times 12 = \square \rightarrow$ <b>S</b>  | $7 \times 10 = \square \rightarrow$ <b>U</b> |                                             |
| $7 \times 5 = \square \rightarrow$ <b>C</b>  | $7 \times 7 = \square \rightarrow$ <b>I</b>   | $1 \times 1 = \square \rightarrow$ <b>L</b>  | $8 \times 4 = \square \rightarrow$ <b>K</b> |
| $6 \times 12 = \square \rightarrow$ <b>A</b> | $1 \times 7 = \square \rightarrow$ <b>B</b>   | $9 \times 10 = \square \rightarrow$ <b>D</b> |                                             |
| $9 \times 6 = \square \rightarrow$ <b>O</b>  | $11 \times 10 = \square \rightarrow$ <b>E</b> | $11 \times 9 = \square \rightarrow$ <b>F</b> |                                             |

Scratch space:

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

The deckhands are fighting over a box of sea biscuits. If we divide the biscuits equally among them, they will give us our final clue.

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:**

$50 \div 10 = \boxed{\phantom{00}}$

$30 \div 3 = \boxed{\phantom{00}}$

$66 \div 11 = \boxed{\phantom{00}}$

$99 \div 11 = \boxed{\phantom{00}}$

$24 \div 3 = \boxed{\phantom{00}}$

$24 \div 2 = \boxed{\phantom{00}}$

$36 \div 12 = \boxed{\phantom{00}}$

$28 \div 4 = \boxed{\phantom{00}}$

$12 \div 12 = \boxed{\phantom{00}}$

$12 \div 3 = \boxed{\phantom{00}}$

$33 \div 3 = \boxed{\phantom{00}}$

**Step 2 - cross out the sentence with each answer:**

1. The villain digs for chests under the palm tree, then tips a fancy velvet captain hat.
2. The villain steers the galleon out of the harbor, then waves a shiny brass hook in the air.
3. The villain steers the galleon out of the harbor, then feeds a cracker to a green parrot.
4. The villain digs for chests under the palm tree, then hops away on a wooden pegleg.
5. The villain fires the cannons to cause a distraction, then tips a fancy velvet captain hat.
6. The villain fires the cannons to cause a distraction, then feeds a cracker to a green parrot.
7. The villain digs for chests under the palm tree, then adjusts a heavy golden eyepatch.
8. The villain reads ancient maps to find a shortcut, then adjusts a heavy golden eyepatch.
9. The villain swings on ropes to climb the mast, then tips a fancy velvet captain hat.
10. The villain fires the cannons to cause a distraction, then hops away on a wooden pegleg.
11. The villain reads ancient maps to find a shortcut, then tips a fancy velvet captain hat.
12. The villain steers the galleon out of the harbor, then hops away on a wooden pegleg.

# Answer Key

## The Mystery of Skull Cove

### Culprit: Calico Jack

steers the galleon · shiny brass hook · left handed swing · black beard · fears tickly feathers

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

#### Clue 1 (Place value): "THE SCOUNDREL HAS NO GOLDEN EYEPATCH"

What is the value of the 3 in 539? = 30 (T) · What is the value of the 6 in 2,680? = 600 (A) · What is the value of the 4 in 1,470? = 400 (Y) · What is the value of the 2 in 2,300? = 2000 (D) · What is the value of the 4 in 6,148? = 40 (E) · What is the value of the 2 in 525? = 20 (R) · What is the value of the 7 in 67,820? = 7000 (C) · What is the value of the 9 in 594? = 90 (U) · What is the value of the 4 in 74,981? = 4000 (N) · What is the value of the 1 in 1,565? = 1000 (L) · What is the value of the 5 in 8,582? = 500 (G) · What is the value of the 5 in 9,151? = 50 (P) · What is the value of the 8 in 8,660? = 8000 (H) · What is the value of the 3 in 317? = 300 (O) · What is the value of the 5 in 5,811? = 5000 (S)

#### Clue 2 (Addition): "THE CRIME WAS DONE LEFT HANDED"

$2984 + 2402 = 5386$  (T) ·  $3865 + 3542 = 7407$  (N) ·  $2580 + 4683 = 7263$  (H) ·  $4486 + 4006 = 8492$  (O) ·  $1543 + 3475 = 5018$  (I) ·  $4485 + 3864 = 8349$  (S) ·  $2932 + 5288 = 8220$  (M) ·  $1766 + 3043 = 4809$  (A) ·  $3540 + 5735 = 9275$  (R) ·  $3078 + 5599 = 8677$  (C) ·  $5952 + 3411 = 9363$  (W) ·  $3728 + 4301 = 8029$  (E) ·  $1834 + 1442 = 3276$  (L) ·  $1341 + 1187 = 2528$  (F) ·  $5298 + 4184 = 9482$  (D)

#### Clue 3 (Subtraction): "THE VILLAIN FEARS TICKLY FEATHERS"

$9509 - 4902 = 4607$  (T) ·  $2128 - 271 = 1857$  (Y) ·  $10262 - 3209 = 7053$  (F) ·  $2997 - 89 = 2908$  (E) ·  $12621 - 3725 = 8896$  (L) ·  $7652 - 3581 = 4071$  (I) ·  $9664 - 3334 = 6330$  (K) ·  $9152 - 3021 = 6131$  (R) ·  $4422 - 2328 = 2094$  (H) ·  $7200 - 4815 = 2385$  (C) ·  $2950 - 756 = 2194$  (S) ·  $6146 - 481 = 5665$  (V) ·  $12609 - 4546 = 8063$  (N) ·  $6725 - 4222 = 2503$  (A)

#### Clue 4 (Multiplication facts (1-12)): "WE FOUND A COARSE BLACK BEARD HAIR"

$3 \times 7 = 21$  (W) ·  $12 \times 11 = 132$  (N) ·  $1 \times 9 = 9$  (H) ·  $8 \times 10 = 80$  (R) ·  $9 \times 12 = 108$  (S) ·  $7 \times 10 = 70$  (U) ·  $7 \times 5 = 35$  (C) ·  $7 \times 7 = 49$  (I) ·  $1 \times 1 = 1$  (L) ·  $8 \times 4 = 32$  (K) ·  $6 \times 12 = 72$  (A) ·  $1 \times 7 = 7$  (B) ·  $9 \times 10 = 90$  (D) ·  $9 \times 6 = 54$  (O) ·  $11 \times 10 = 110$  (E) ·  $11 \times 9 = 99$  (F)

#### Clue 5 (Division facts (1-12)): surviving statement is box 2 → Calico Jack

$50 \div 10 = 5$  ·  $30 \div 3 = 10$  ·  $66 \div 11 = 6$  ·  $99 \div 11 = 9$  ·  $24 \div 3 = 8$  ·  $24 \div 2 = 12$  ·  $36 \div 12 = 3$  ·  $28 \div 4 = 7$  ·  $12 \div 12 = 1$  ·  $12 \div 3 = 4$  ·  $33 \div 3 = 11$