



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 **Addition**

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

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

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

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

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

$1543 + 3475 = \boxed{} \rightarrow \boxed{} \mid$

$$4485 + 3864 = \boxed{} \rightarrow \mathbf{S}$$

$2932 + 5288 = \boxed{} \rightarrow \mathbf{M}$

$1766 + 3043 = \boxed{} \rightarrow \mathbf{A}$

$$3540 + 5735 = \boxed{} \rightarrow \mathbf{R}$$

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

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

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

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

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

$$5298 + 4184 = \boxed{} \rightarrow \mathbf{D}$$

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.

W																		
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										

$3 \times 7 = \square \rightarrow \boxed{W}$

$12 \times 11 = \square \rightarrow \boxed{N}$

$1 \times 9 = \square \rightarrow \boxed{H}$

$8 \times 10 = \square \rightarrow \boxed{R}$

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

$7 \times 10 = \square \rightarrow \boxed{U}$

$7 \times 5 = \square \rightarrow \boxed{C}$

$7 \times 7 = \square \rightarrow \boxed{I}$

$1 \times 1 = \square \rightarrow \boxed{L}$

$8 \times 4 = \square \rightarrow \boxed{K}$

$6 \times 12 = \square \rightarrow \boxed{A}$

$1 \times 7 = \square \rightarrow \boxed{B}$

$9 \times 10 = \square \rightarrow \boxed{D}$

$9 \times 6 = \square \rightarrow \boxed{O}$

$11 \times 10 = \square \rightarrow \boxed{E}$

$11 \times 9 = \square \rightarrow \boxed{F}$

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:

$50 \div 10 = \boxed{}$

$30 \div 3 = \boxed{}$

$66 \div 11 = \boxed{}$

$99 \div 11 = \boxed{}$

$24 \div 3 = \boxed{}$

$24 \div 2 = \boxed{}$

$36 \div 12 = \boxed{}$

$28 \div 4 = \boxed{}$

$12 \div 12 = \boxed{}$

$12 \div 3 = \boxed{}$

$33 \div 3 = \boxed{}$

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

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