



The Mystery of the Stolen Star Chart

Grade 5 math · Rounding, Multiplication, Word problems, Fractions of a number, Division · Reading level grades 5-6

Detective: _____ Date: _____

A mysterious rogue captain slipped into Blackstone Cove at midnight and swiped the ancient Star Chart! Search the clues left across the harbor to unmask the culprit before they sail away.

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 rogue captain is _____

Possible suspects

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

NAME	PRIMARY WEAPON	PIRATE FLAG	DOMINANT HAND	BEARD STYLE	FEARED CREATURE
John Jennings	Grappling Hook	Crowned Skull Flag	Right Handed	Braided Beard	Giant Squid
Bartholomeu	Cutlass	Anchor Banner	Left Handed	Trimmed Stubble	Giant Squid
George Lowther	Boarding Axe	Anchor Banner	Right Handed	Bushy Beard	Siren Song
Captain Kidd	Blunderbuss	Golden Compass Flag	Left Handed	Braided Beard	Screeching Parrot
Francois Iollonais	Flintlock	Crowned Skull Flag	Right Handed	Braided Beard	Screeching Parrot
Howell Davis	Grappling Hook	Sea Serpent Flag	Right Handed	Trimmed Stubble	Siren Song
Blackbeard	Cutlass	Golden Compass Flag	Left Handed	Braided Beard	Siren Song
Christopher Myngs	Flintlock	Anchor Banner	Left Handed	Braided Beard	Giant Squid
Henry Morgan	Blunderbuss	Anchor Banner	Right Handed	Braided Beard	Giant Squid
Woodes Rogers	Grappling Hook	Jolly Roger Banner	Left Handed	Braided Beard	Giant Squid
Anne Bonny	Boarding Axe	Sea Serpent Flag	Left Handed	Trimmed Stubble	Screeching Parrot
Stede Bonnet	Flintlock	Golden Compass Flag	Left Handed	Trimmed Stubble	Giant Squid
Calico Jack	Blunderbuss	Jolly Roger Banner	Left Handed	Braided Beard	Giant Squid
John Esquemeling	Grappling Hook	Golden Compass Flag	Right Handed	Bushy Beard	Giant Squid
Thomas Tew	Flintlock	Jolly Roger Banner	Right Handed	Bushy Beard	Screeching Parrot
Grace O'Malley	Cutlass	Anchor Banner	Left Handed	Braided Beard	Giant Squid
Edward Low	Flintlock	Sea Serpent Flag	Right Handed	Braided Beard	Siren Song
Charles Vane	Flintlock	Jolly Roger Banner	Right Handed	Trimmed Stubble	Giant Squid
Robert Culliford	Flintlock	Crowned Skull Flag	Right Handed	Bushy Beard	Screeching Parrot
Samuel Bellamy	Blunderbuss	Jolly Roger Banner	Right Handed	Braided Beard	Giant Squid
Mary Read	Flintlock	Sea Serpent Flag	Left Handed	Braided Beard	Giant Squid

CLUE 1

The ship spyglass display only shows rounded totals. Estimate the distance to the pirate ship to decode the first clue.

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

5000 3700 1300 370 290 500 500 3000 290 2900 1100 110 1300 130 2900 110 5000

230 130 1300 3000 130 1300 3000 130 1300 7000 2300 1300 2900 5000 30 500 3000 300

Round 5,256 to the nearest thousand $\rightarrow$ **T**

Round 30 to the nearest ten $\rightarrow$ **F**

Round 2,569 to the nearest thousand → **A**

Round 1,064 to the nearest hundred $\rightarrow$ **D**

Round 2,267 to the nearest hundred $\rightarrow$ **P**

Round 3,666 to the nearest hundred $\rightarrow$ **H**

Round 294 to the nearest hundred → **G**

Round 226 to the nearest ten $\rightarrow$ **U**

Round 2,935 to the nearest hundred → **N**

Round 6,911 to the nearest thousand $\rightarrow$ **R**

Round 127 to the nearest ten $\rightarrow$ **S**

Round 1,305 to the nearest hundred → **E**

Round 369 to the nearest ten $\rightarrow$ **V**

Round 286 to the nearest ten $\rightarrow$

Round 537 to the nearest hundred $\rightarrow$ **L**

Round 114 to the nearest ten $\rightarrow$

Scratch space:

CLUE 2 Multiplication facts (1-12)

Quartermaster Pete counts equal stacks of gold coins in the ship vault. Multiply the rows to discover the next clue.

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: 'T' (orange), empty, empty, empty, empty, empty, empty, empty, empty, empty, 'T' (orange), empty, empty. The bottom row contains the following values from left to right: empty, empty, empty, 'T' (orange), empty, empty, empty, empty, 'T' (orange), empty, empty, empty, empty. Below each box is a number. The top row numbers are: 77, 120, 18, 12, 35, 16, 16, 80, 35, 81, 120, 18, 16, 14, 77, 120, 18. The bottom row numbers are: 30, 80, 20, 35, 81, 77, 120, 18, 16, 18, 27, 77, 120, 80, 81, 14.

$$7 \times 11 = \boxed{} \rightarrow \boxed{\text{T}}$$

$3 \times 6 = \boxed{} \rightarrow \boxed{\text{E}}$

$$6 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{v}}$$

$10 \times 3 = \boxed{} \rightarrow \boxed{\text{M}}$

$9 \times 3 = \boxed{} \rightarrow \boxed{\text{F}}$

$7 \times 2 = \boxed{} \rightarrow \boxed{\text{D}}$

$9 \times 9 = \square \rightarrow \boxed{\text{N}}$

$$5 \times 4 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$7 \times 5 = \boxed{} \rightarrow \boxed{1}$$

$$2 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{L}}$$

$10 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$$12 \times 10 = \boxed{} \rightarrow \boxed{\text{H}}$$

Scratch space:

CLUE 3

Word problems

The crew needs to calculate total rations used during the voyage. Solve the story problem to reveal the third clue.

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

Someone scared the villain off with G U D .

66 18 114 35 61 32 17 18

There were 99 ruby rings. 33 were used up. How many ruby rings are left?

Answer: → G

Quartermaster found 61 doubloons yesterday and 53 more today. How many doubloons in all?

Answer: → A

Quartermaster found 15 brass compasses yesterday and 17 more today. How many brass compasses in all?

Answer: → S

There were 26 iron cannonballs. 9 were used up. How many iron cannonballs are left?

Answer: → Q

Quartermaster lined up 2 rows of 9 map scrolls. How many map scrolls in all?

Answer: → I

Quartermaster found 23 iron cannonballs yesterday and 38 more today. How many iron cannonballs in all?

Answer: → T

Quartermaster lined up 7 rows of 5 iron cannonballs. How many iron cannonballs in all?

Answer: → N

Scratch space:

CLUE 4

Fractions of a number

Only a fractional portion of the stolen treasure chest was recovered. Calculate the fraction to unlock the fourth clue.

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

D														D	
26	28	19	28	22	19	16	8	28	13	25	35	36	20	26	2

				D		D								D			
3	17	2	16	26	28	26	39	2	16	17	35	20	26	28	22	15	

$1/4 \text{ of } 104 = \square \rightarrow \text{D}$

$8/10 \text{ of } 10 = \square \rightarrow \text{V}$

$5/10 \text{ of } 70 = \square \rightarrow \text{O}$

$5/10 \text{ of } 78 = \square \rightarrow \text{H}$

$2/5 \text{ of } 55 = \square \rightarrow \text{C}$

$3/6 \text{ of } 34 = \square \rightarrow \text{R}$

$2/8 \text{ of } 8 = \square \rightarrow \text{A}$

$1/3 \text{ of } 84 = \square \rightarrow \text{E}$

$1/4 \text{ of } 100 = \square \rightarrow \text{F}$

$2/8 \text{ of } 76 = \square \rightarrow \text{T}$

$1/3 \text{ of } 108 = \square \rightarrow \text{U}$

$2/8 \text{ of } 52 = \square \rightarrow \text{S}$

$4/8 \text{ of } 40 = \square \rightarrow \text{N}$

$1/10 \text{ of } 160 = \square \rightarrow \text{I}$

$2/6 \text{ of } 9 = \square \rightarrow \text{B}$

$1/8 \text{ of } 120 = \square \rightarrow \text{K}$

Scratch space:

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

Captain Redbeard wants to share the loot equally among his loyal sailors. Divide the gold pieces to unlock the 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:

$63 \div 9 = \boxed{}$

$60 \div 10 = \boxed{}$

$72 \div 8 = \boxed{}$

$2 \div 1 = \boxed{}$

$30 \div 3 = \boxed{}$

$80 \div 10 = \boxed{}$

$30 \div 10 = \boxed{}$

$5 \div 1 = \boxed{}$

$33 \div 3 = \boxed{}$

$8 \div 2 = \boxed{}$

$48 \div 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain blasted a loud blunderbuss, then hoisted a jolly roger banner.
2. The villain swung a sharp cutlass, then hoisted a jolly roger banner.
3. The villain fired a smoke flintlock, then displayed a crowned skull flag.
4. The villain tossed a heavy grappling hook, then displayed a crowned skull flag.
5. The villain tossed a heavy grappling hook, then raised a sea serpent flag.
6. The villain tossed a heavy grappling hook, then hoisted a jolly roger banner.
7. The villain fired a smoke flintlock, then unfurled an anchor banner.
8. The villain blasted a loud blunderbuss, then flown a golden compass flag.
9. The villain swung a sharp cutlass, then unfurled an anchor banner.
10. The villain fired a smoke flintlock, then raised a sea serpent flag.
11. The villain chopped with a boarding axe, then unfurled an anchor banner.
12. The villain blasted a loud blunderbuss, then raised a sea serpent flag.

Answer Key

The Mystery of the Stolen Star Chart

Culprit: Calico Jack

Blunderbuss · Jolly Roger Banner · Left Handed · Braided Beard · Giant Squid

Trail: Start 21 → Clue 1 17 → Clue 2 8 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT USE A SEA SERPENT FLAG"

Round 5,256 to the nearest thousand = 5000 (T) · Round 30 to the nearest ten = 30 (F) · Round 2,569 to the nearest thousand = 3000 (A) · Round 1,064 to the nearest hundred = 1100 (D) · Round 2,267 to the nearest hundred = 2300 (P) · Round 3,666 to the nearest hundred = 3700 (H) · Round 294 to the nearest hundred = 300 (G) · Round 226 to the nearest ten = 230 (U) · Round 2,935 to the nearest hundred = 2900 (N) · Round 6,911 to the nearest thousand = 7000 (R) · Round 127 to the nearest ten = 130 (S) · Round 1,305 to the nearest hundred = 1300 (E) · Round 369 to the nearest ten = 370 (V) · Round 286 to the nearest ten = 290 (I) · Round 537 to the nearest hundred = 500 (L) · Round 114 to the nearest ten = 110 (O)

Clue 2 (Multiplication facts (1-12)): "THE VILLAIN HELD THE MAP IN THE LEFT HAND"

$7 \times 11 = 77$ (T) · $3 \times 6 = 18$ (E) · $6 \times 2 = 12$ (V) · $10 \times 3 = 30$ (M) · $9 \times 3 = 27$ (F) · $7 \times 2 = 14$ (D) · $9 \times 9 = 81$ (N) · $5 \times 4 = 20$ (P) · $7 \times 5 = 35$ (I) · $2 \times 8 = 16$ (L) · $10 \times 8 = 80$ (A) · $12 \times 10 = 120$ (H)

Clue 3 (Word problems): "GIANT SQUID"

There were 99 ruby rings. 33 were used up. How many ruby rings are left? = 66 (G) · Quartermaster found 61 doubloons yesterday and 53 more today. How many doubloons in all? = 114 (A) · Quartermaster found 15 brass compasses yesterday and 17 more today. How many brass compasses in all? = 32 (S) · There were 26 iron cannonballs. 9 were used up. How many iron cannonballs are left? = 17 (Q) · Quartermaster lined up 2 rows of 9 map scrolls. How many map scrolls in all? = 18 (I) · Quartermaster found 23 iron cannonballs yesterday and 38 more today. How many iron cannonballs in all? = 61 (T) · Quartermaster lined up 7 rows of 5 iron cannonballs. How many iron cannonballs in all? = 35 (N)

Clue 4 (Fractions of a number): "DETECTIVES FOUND A BRAIDED HAIR ON DECK"

$1/4$ of 104 = 26 (D) · $8/10$ of 10 = 8 (V) · $5/10$ of 70 = 35 (O) · $5/10$ of 78 = 39 (H) · $2/5$ of 55 = 22 (C) · $3/6$ of 34 = 17 (R) · $2/8$ of 8 = 2 (A) · $1/3$ of 84 = 28 (E) · $1/4$ of 100 = 25 (F) · $2/8$ of 76 = 19 (T) · $1/3$ of 108 = 36 (U) · $2/8$ of 52 = 13 (S) · $4/8$ of 40 = 20 (N) · $1/10$ of 160 = 16 (I) · $2/6$ of 9 = 3 (B) · $1/8$ of 120 = 15 (K)

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

$63 \div 9 = 7$ · $60 \div 10 = 6$ · $72 \div 8 = 9$ · $2 \div 1 = 2$ · $30 \div 3 = 10$ · $80 \div 10 = 8$ · $30 \div 10 = 3$ · $5 \div 1 = 5$ · $33 \div 3 = 11$ · $8 \div 2 = 4$ · $48 \div 4 = 12$