



The Mystery of the Missing Royal Pearl

Grade 6 math · Place value, Addition, Multiplication, Rounding, Missing addends · Reading level grades 5-6

Detective: _____ Date: _____

A sneaky mermaid swiped the Glowing Royal Pearl right out of the underwater vault! Help Captain Shellfinder solve math clues to unmask the villain before they escape into the deep trench.

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 Pearl Thief is _____

Possible suspects

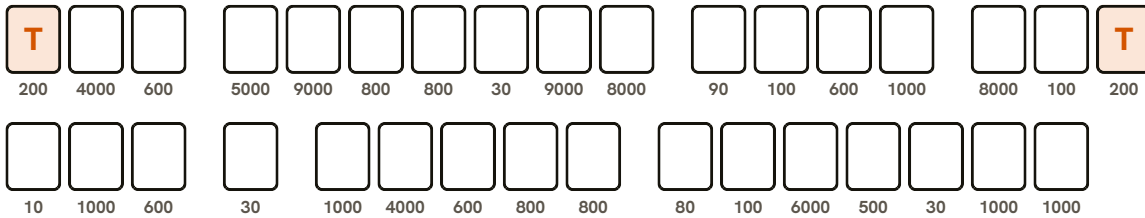
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SWIM STYLE	SEA GADGET	FIN BAND SIDE	TAIL SCALE COLOR	PEARL ALLERGY
Ray Current	Dolphin Kick	Shell Compass	Left Fin Band	Aquamarine	Sea Lavender
Marina Wave	Deep Trench Dive	Shell Compass	Right Fin Band	Sunbeam Gold	Sea Lavender
Ursula Abyss	Dolphin Kick	Coral Whistle	Right Fin Band	Emerald Green	Sea Lavender
Captain Triton	Dolphin Kick	Coral Whistle	Left Fin Band	Aquamarine	Electric Anemone
Oceanus Drake	Dolphin Kick	Sea Glass Mirror	Left Fin Band	Aquamarine	Starlight Jelly
Wade Waters	Tidal Dash	Coral Whistle	Left Fin Band	Emerald Green	Electric Anemone
Coralina Deep	Tidal Dash	Sea Glass Mirror	Right Fin Band	Emerald Green	Starlight Jelly
Nerida Blue	Deep Trench Dive	Coral Whistle	Left Fin Band	Emerald Green	Starlight Jelly
Calypso Ridge	Dolphin Kick	Kelp Lasso	Left Fin Band	Emerald Green	Electric Anemone
Caspian Cove	Sidewinder Glide	Bubble Shield	Left Fin Band	Emerald Green	Sea Lavender
Coral Reef	Sidewinder Glide	Kelp Lasso	Left Fin Band	Sunbeam Gold	Sea Lavender
Pearlina Glide	Tidal Dash	Shell Compass	Right Fin Band	Sunbeam Gold	Sea Lavender
Delphine Splash	Tidal Dash	Kelp Lasso	Left Fin Band	Aquamarine	Starlight Jelly
Mako Ridge	Deep Trench Dive	Shell Compass	Left Fin Band	Aquamarine	Starlight Jelly
Seabert Fin	Current Surfing	Coral Whistle	Left Fin Band	Aquamarine	Sea Lavender
Finneas Tide	Deep Trench Dive	Coral Whistle	Left Fin Band	Aquamarine	Starlight Jelly
Bubbles Lagoon	Dolphin Kick	Coral Whistle	Right Fin Band	Aquamarine	Starlight Jelly
Triton Vance	Tidal Dash	Coral Whistle	Left Fin Band	Aquamarine	Sea Lavender
Shelly Sands	Sidewinder Glide	Bubble Shield	Left Fin Band	Aquamarine	Starlight Jelly
Pearl Starling	Dolphin Kick	Kelp Lasso	Left Fin Band	Aquamarine	Electric Anemone
Sandy Shoals	Sidewinder Glide	Kelp Lasso	Left Fin Band	Aquamarine	Sea Lavender

CLUE 1 Place value

To decode the first message, analyze the digit values on the palace sonar display.

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



What is the value of the 2 in 39,269?

→ T

What is the value of the 5 in 22,526?

→ P

What is the value of the 1 in 639,215?

→ U

What is the value of the 8 in 44,829?

→ L

What is the value of the 9 in 49,217?

→ I

What is the value of the 6 in 936,140?

→ M

What is the value of the 6 in 357,670?

→ E

What is the value of the 8 in 226,985?

→ C

What is the value of the 1 in 391,567?

→ S

What is the value of the 4 in 324,317?

→ H

What is the value of the 8 in 778,119?

→ N

What is the value of the 3 in 440,138?

→ A

What is the value of the 5 in 435,294?

→ V

What is the value of the 9 in 500,695?

→ D

What is the value of the 1 in 899,142?

→ O

Scratch space:

CLUE 2

Addition

To discover the second hint, combine the counts of sea crystals collected from each reef sector.

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

T																	
5217	3361	6221	7384	6264	5217	6591	6221	2529	2529	2529	5124	7384	5124	3773	5124	6591	3556

4881	6591	5217	3361	6221	4428	6221	4493	5217	4493	6264	6591

$3216 + 2001 = \square \rightarrow \text{T}$

$2886 + 3705 = \square \rightarrow \text{N}$

$2472 + 4912 = \square \rightarrow \text{W}$

$1992 + 1369 = \square \rightarrow \text{H}$

$4010 + 2254 = \square \rightarrow \text{I}$

$1661 + 868 = \square \rightarrow \text{S}$

$2237 + 2191 = \square \rightarrow \text{L}$

$3688 + 2533 = \square \rightarrow \text{E}$

$1702 + 2791 = \square \rightarrow \text{F}$

$1830 + 3051 = \square \rightarrow \text{O}$

$1992 + 1564 = \square \rightarrow \text{D}$

$1662 + 2111 = \square \rightarrow \text{B}$

$3515 + 1609 = \square \rightarrow \text{A}$

Scratch space:

CLUE 3
Multiplication facts (1-12)

To reveal the third clue, calculate the total scales in these equal rows of kelp armors.

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

T			T															
42	35	36	42	35	100	36	4	12	14	8	44	36	6	36	56	56	36	81

			T							T					
25	48	8	42	14	44	56	100	9	35	42	32	36	56	56	48

$6 \times 7 = \square \rightarrow \text{T}$

$5 \times 5 = \square \rightarrow \text{B}$

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

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

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

$2 \times 2 = \square \rightarrow \text{F}$

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

$2 \times 3 = \square \rightarrow \text{P}$

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

$9 \times 9 = \square \rightarrow \text{D}$

$9 \times 1 = \square \rightarrow \text{G}$

$8 \times 6 = \square \rightarrow \text{Y}$

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

$8 \times 7 = \square \rightarrow \text{L}$

$9 \times 4 = \square \rightarrow \text{E}$

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

Scratch space:

CLUE 4 Rounding

To unlock the fourth piece of evidence, round the long distance depth gauge readings to the nearest hundred.

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

A							A			A		A						
50	3700	500	200	30	7000	5000	50	700	3000	50	130	50	500	200	1700	110		
		A				A								A				
1100	20	50	900	110	1300	50	1100	2300	70	3000	1700	300	1700	110	50	500	3700	2900

Round 54 to the nearest ten → **A**

Round 254 to the nearest hundred → **D**

Round 3,722 to the nearest hundred → **B**

Round 1,133 to the nearest hundred → **S**

Round 131 to the nearest ten → **M**

Round 7,017 to the nearest thousand → **H**

Round 2,321 to the nearest hundred → **F**

Round 33 to the nearest ten → **G**

Round 708 to the nearest hundred → **Q**

Round 1,670 to the nearest hundred → **N**

Round 940 to the nearest hundred → **L**

Round 21 to the nearest ten → **C**

Round 1,345 to the nearest hundred → **W**

Round 5,116 to the nearest thousand → **T**

Round 2,853 to the nearest hundred → **Y**

Round 111 to the nearest ten → **E**

Round 156 to the nearest hundred → **I**

Round 73 to the nearest ten → **O**

Round 3,134 to the nearest thousand → **U**

Round 525 to the nearest hundred → **R**

Scratch space:

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

To uncover the final clue, solve for the missing pearl weights needed to balance the vault scale.

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:

$29 + \underline{\quad} = 41$

$20 + \underline{\quad} = 29$

$38 + \underline{\quad} = 44$

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

$28 + \underline{\quad} = 31$

$26 + \underline{\quad} = 28$

$18 + \underline{\quad} = 25$

$4 + \underline{\quad} = 15$

$37 + \underline{\quad} = 45$

$17 + \underline{\quad} = 22$

$32 + \underline{\quad} = 33$

Step 2 - cross out the sentence with each answer:

1. The villain darted past in a tidal dash, then flashed a sea glass mirror.
2. The villain glided in with a dolphin kick, then deployed a bubble shield.
3. The villain zipped through with a sidewinder glide, then tangled the guards with a kelp lasso.
4. The villain glided in with a dolphin kick, then flashed a sea glass mirror.
5. The villain zipped through with a sidewinder glide, then checked a shell compass.
6. The villain plunged down in a deep trench dive, then sounded a coral whistle.
7. The villain darted past in a tidal dash, then deployed a bubble shield.
8. The villain darted past in a tidal dash, then checked a shell compass.
9. The villain zipped through with a sidewinder glide, then deployed a bubble shield.
10. The villain zoomed along by current surfing, then tangled the guards with a kelp lasso.
11. The villain zoomed along by current surfing, then sounded a coral whistle.
12. The villain darted past in a tidal dash, then tangled the guards with a kelp lasso.

Answer Key

The Mystery of the Missing Royal Pearl

Culprit: Oceanus Drake

Dolphin Kick · Sea Glass Mirror · Left Fin Band · Aquamarine · Starlight Jelly

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE A SHELL COMPASS"

What is the value of the 2 in 39,269? = 200 (T) · What is the value of the 5 in 22,526? = 500 (P) · What is the value of the 1 in 639,215? = 10 (U) · What is the value of the 8 in 44,829? = 800 (L) · What is the value of the 9 in 49,217? = 9000 (I) · What is the value of the 6 in 936,140? = 6000 (M) · What is the value of the 6 in 357,670? = 600 (E) · What is the value of the 8 in 226,985? = 80 (C) · What is the value of the 1 in 391,567? = 1000 (S) · What is the value of the 4 in 324,317? = 4000 (H) · What is the value of the 8 in 778,119? = 8000 (N) · What is the value of the 3 in 440,138? = 30 (A) · What is the value of the 5 in 435,294? = 5000 (V) · What is the value of the 9 in 500,695? = 90 (D) · What is the value of the 1 in 899,142? = 100 (O)

Clue 2 (Addition): "THE WITNESS SAW A BAND ON THE LEFT FIN"

$3216 + 2001 = 5217$ (T) · $2886 + 3705 = 6591$ (N) · $2472 + 4912 = 7384$ (W) · $1992 + 1369 = 3361$ (H) · $4010 + 2254 = 6264$ (I) · $1661 + 868 = 2529$ (S) · $2237 + 2191 = 4428$ (L) · $3688 + 2533 = 6221$ (E) · $1702 + 2791 = 4493$ (F) · $1830 + 3051 = 4881$ (O) · $1992 + 1564 = 3556$ (D) · $1662 + 2111 = 3773$ (B) · $3515 + 1609 = 5124$ (A)

Clue 3 (Multiplication facts (1-12)): "THE THIEF WAS REPELLED BY STARLIGHT JELLY"

$6 \times 7 = 42$ (T) · $5 \times 5 = 25$ (B) · $4 \times 11 = 44$ (R) · $2 \times 4 = 8$ (S) · $2 \times 6 = 12$ (W) · $2 \times 2 = 4$ (F) · $10 \times 10 = 100$ (I) · $2 \times 3 = 6$ (P) · $4 \times 8 = 32$ (J) · $9 \times 9 = 81$ (D) · $9 \times 1 = 9$ (G) · $8 \times 6 = 48$ (Y) · $7 \times 2 = 14$ (A) · $8 \times 7 = 56$ (L) · $9 \times 4 = 36$ (E) · $7 \times 5 = 35$ (H)

Clue 4 (Rounding): "A BRIGHT AQUAMARINE SCALE WAS FOUND NEARBY"

Round 54 to the nearest ten = 50 (A) · Round 254 to the nearest hundred = 300 (D) · Round 3,722 to the nearest hundred = 3700 (B) · Round 1,133 to the nearest hundred = 1100 (S) · Round 131 to the nearest ten = 130 (M) · Round 7,017 to the nearest thousand = 7000 (H) · Round 2,321 to the nearest hundred = 2300 (F) · Round 33 to the nearest ten = 30 (G) · Round 708 to the nearest hundred = 700 (Q) · Round 1,670 to the nearest hundred = 1700 (N) · Round 940 to the nearest hundred = 900 (L) · Round 21 to the nearest ten = 20 (C) · Round 1,345 to the nearest hundred = 1300 (W) · Round 5,116 to the nearest thousand = 5000 (T) · Round 2,853 to the nearest hundred = 2900 (Y) · Round 111 to the nearest ten = 110 (E) · Round 156 to the nearest hundred = 200 (I) · Round 73 to the nearest ten = 70 (O) · Round 3,134 to the nearest thousand = 3000 (U) · Round 525 to the nearest hundred = 500 (R)

Clue 5 (Missing addends): surviving statement is box 4 → Oceanus Drake

$29 + \underline{\quad} = 41 = 12$ · $20 + \underline{\quad} = 29 = 9$ · $38 + \underline{\quad} = 44 = 6$ · $7 + \underline{\quad} = 17 = 10$ · $28 + \underline{\quad} = 31 = 3$ · $26 + \underline{\quad} = 28 = 2$ · $18 + \underline{\quad} = 25 = 7$ · $4 + \underline{\quad} = 15 = 11$ · $37 + \underline{\quad} = 45 = 8$ · $17 + \underline{\quad} = 22 = 5$ · $32 + \underline{\quad} = 33 = 1$