The Case of the Missing Pearl Scepter

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

Detective: _____ **Date:** _____

Queen Coralia woke up to find the Pearl Scepter missing from the Reef Palace vaults. A rogue sea sorcerer snuck inside, leaving ocean clues behind. Use your detective skills and marine evidence to unmask the aquatic 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 rogue sea sorcerer is _____

Possible suspects

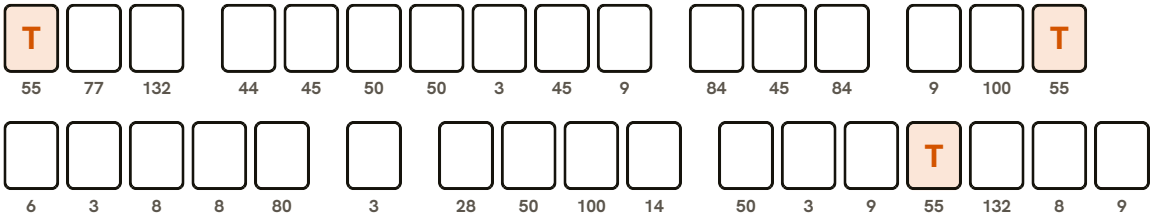
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SEA MAGIC	ENCHANTED RELIC	SWIMMING STYLE	TAIL FINS	MAGIC SHELL
Coralia Reef	Bubble Blasting	Conch Horn	Left Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Pearl Periwinkle	Whirlpool Summoning	Pearl Shield	Right Fins Swimmer	Iridescent Pink Fin	Prismatic Opal Shell
Oceana Crest	Tide Bending	Conch Horn	Right Fins Swimmer	Deep Emerald Fin	Prismatic Opal Shell
Triton Sands	Coral Sculpting	Pearl Shield	Right Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Delphine Tide	Siren Chanting	Conch Horn	Left Fins Swimmer	Deep Emerald Fin	Sonic Conch Shell
Calypso Cove	Bubble Blasting	Pearl Shield	Left Fins Swimmer	Iridescent Pink Fin	Sonic Conch Shell
Glaucus Foam	Tide Bending	Conch Horn	Left Fins Swimmer	Deep Emerald Fin	Prismatic Opal Shell
Marina Wave	Coral Sculpting	Pearl Shield	Left Fins Swimmer	Iridescent Pink Fin	Sunlit Amber Shell
Caspian Shell	Bubble Blasting	Conch Horn	Left Fins Swimmer	Deep Emerald Fin	Prismatic Opal Shell
Doris Trench	Coral Sculpting	Glow Lantern	Left Fins Swimmer	Shimmering Turquoise Fin	Prismatic Opal Shell
Ray Surge	Bubble Blasting	Glow Lantern	Left Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Vapor Eddy	Siren Chanting	Conch Horn	Left Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Nautilus Ned	Tide Bending	Pearl Shield	Left Fins Swimmer	Shimmering Turquoise Fin	Prismatic Opal Shell
Maren Deep	Coral Sculpting	Trident Flash	Left Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Nereus Splash	Bubble Blasting	Kelp Lasso	Right Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Tethys Brook	Coral Sculpting	Pearl Shield	Left Fins Swimmer	Shimmering Turquoise Fin	Prismatic Opal Shell
Pelagia Spray	Bubble Blasting	Kelp Lasso	Left Fins Swimmer	Deep Emerald Fin	Sunlit Amber Shell
Kai Current	Tide Bending	Glow Lantern	Left Fins Swimmer	Iridescent Pink Fin	Sonic Conch Shell
Thalassa Shoal	Whirlpool Summoning	Conch Horn	Left Fins Swimmer	Iridescent Pink Fin	Prismatic Opal Shell
Nerida Salt	Siren Chanting	Glow Lantern	Right Fins Swimmer	Iridescent Pink Fin	Sunlit Amber Shell
Sirenna Blue	Bubble Blasting	Kelp Lasso	Left Fins Swimmer	Deep Emerald Fin	Prismatic Opal Shell

CLUE 1 Multiplication facts (1-12)

The guard calculated the total number of magic clams in grid rows to decrypt the first clue.

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



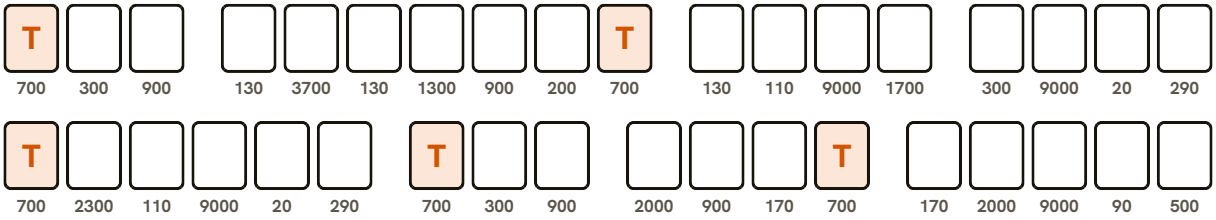
11 × 5 = ☐ → T	3 × 2 = ☐ → C	4 × 2 = ☐ → R
11 × 7 = ☐ → H	2 × 7 = ☐ → W	1 × 9 = ☐ → N
10 × 10 = ☐ → O	11 × 12 = ☐ → E	12 × 7 = ☐ → D
9 × 5 = ☐ → I	5 × 10 = ☐ → L	4 × 11 = ☐ → V
7 × 4 = ☐ → G	8 × 10 = ☐ → Y	3 × 1 = ☐ → A

Scratch space:

CLUE 2 Rounding

The sonar console rounded the depth readings to the nearest hundred meters to reveal ocean movements.

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



Round 699 to the nearest hundred ☐ → T

Round 106 to the nearest ten ☐ → W

Round 267 to the nearest hundred ☐ → H

Round 1,268 to the nearest hundred ☐ → P

Round 3,699 to the nearest hundred ☐ → U

Round 171 to the nearest ten ☐ → F

Round 8,550 to the nearest thousand ☐ → A

Round 290 to the nearest ten ☐ → D

Round 2,309 to the nearest thousand ☐ → L

Round 538 to the nearest hundred ☐ → K

Round 17 to the nearest ten ☐ → R

Round 908 to the nearest hundred ☐ → E

Round 1,701 to the nearest hundred ☐ → M

Round 90 to the nearest ten ☐ → N

Round 127 to the nearest ten ☐ → S

Round 2,266 to the nearest hundred ☐ → O

Round 190 to the nearest hundred ☐ → C

Scratch space:

CLUE 3 Word problems

Analyzing the supply logs of sea crystal crates gives us the next clue.

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

Someone scared the villain off with



There were 124 starfish tokens. 12 were used up. How many starfish tokens are left?

Answer: ☐ → **S**

Reef Scout lined up 7 rows of 9 sea shells. How many sea shells in all?

Answer: ☐ → **U**

Reef Scout found 10 starfish tokens yesterday and 2 more today. How many starfish tokens in all?

Answer: ☐ → **L**

There were 67 starfish tokens. 24 were used up. How many starfish tokens are left?

Answer: ☐ → **N**

There were 143 glowing pearls. 40 were used up. How many glowing pearls are left?

Answer: ☐ → **A**

There were 121 kelp bundles. 39 were used up. How many kelp bundles are left?

Answer: ☐ → **T**

Reef Scout found 30 coral gems yesterday and 28 more today. How many coral gems in all?

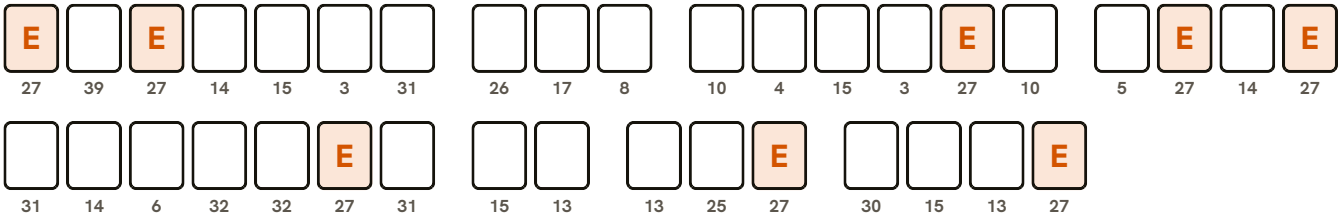
Answer: ☐ → **I**

Scratch space:

CLUE 4 Fractions of a number

> The vault code requires taking a precise fraction of the total pearl count stored inside.

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



1/3 of 81 = ☐ → E	4/6 of 48 = ☐ → P	1/10 of 150 = ☐ → A
5/10 of 16 = ☐ → N	2/8 of 56 = ☐ → R	5/6 of 6 = ☐ → W
3/8 of 16 = ☐ → O	1/5 of 65 = ☐ → T	5/8 of 40 = ☐ → H
3/4 of 4 = ☐ → L	1/4 of 104 = ☐ → F	1/4 of 156 = ☐ → M
2/10 of 50 = ☐ → S	1/3 of 12 = ☐ → C	1/2 of 60 = ☐ → G
1/4 of 68 = ☐ → I	4/8 of 62 = ☐ → D	

Scratch space:

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

> Dividing the salvaged gold doubloons equally among five patrol guards unlocks the final lead.

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:

12 ÷ 12 = ☐	50 ÷ 10 = ☐	56 ÷ 8 = ☐	30 ÷ 3 = ☐	4 ÷ 1 = ☐
18 ÷ 2 = ☐	4 ÷ 2 = ☐	96 ÷ 12 = ☐	72 ÷ 6 = ☐	18 ÷ 6 = ☐
18 ÷ 3 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain blasted heavy bubbles, then threw a kelp lasso.
2. The villain sculpted sharp coral, then raised a pearl shield.
3. The villain summoned a wild whirlpool, then lit a glow lantern.
4. The villain summoned a wild whirlpool, then threw a kelp lasso.
5. The villain sang a siren chant, then blew a conch horn.
6. The villain bent the ocean tides, then lit a glow lantern.
7. The villain sculpted sharp coral, then flashed a sea trident.
8. The villain summoned a wild whirlpool, then blew a conch horn.
9. The villain sang a siren chant, then flashed a sea trident.
10. The villain sculpted sharp coral, then lit a glow lantern.
11. The villain blasted heavy bubbles, then blew a conch horn.
12. The villain summoned a wild whirlpool, then flashed a sea trident.

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TEACHER / PARENT

Answer Key

The Case of the Missing Pearl Scepter

Culprit: Coralia Reef

Bubble Blasting · Conch Horn · Left Fins Swimmer · Deep Emerald Fin · Sunlit Amber Shell

Trail: Start 21 → Clue 1 17 → Clue 2 13 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DID NOT CARRY A GLOW LANTERN"

11 × 5 = 55 (T) · 3 × 2 = 6 (C) · 4 × 2 = 8 (R) · 11 × 7 = 77 (H) · 2 × 7 = 14 (W) · 1 × 9 = 9 (N) · 10 × 10 = 100 (O) · 11 × 12 = 132 (E) · 12 × 7 = 84 (D) · 9 × 5 = 45 (I) · 5 × 10 = 50 (L) · 4 × 11 = 44 (V) · 7 × 4 = 28 (G) · 8 × 10 = 80 (Y) · 3 × 1 = 3 (A)

Clue 2 (Rounding): "THE SUSPECT SWAM HARD TOWARD THE LEFT FLANK"

Round 699 to the nearest hundred = 700 (T) · Round 106 to the nearest ten = 110 (W) · Round 267 to the nearest hundred = 300 (H) · Round 1,268 to the nearest hundred = 1300 (P) · Round 3,699 to the nearest hundred = 3700 (U) · Round 171 to the nearest ten = 170 (F) · Round 8,550 to the nearest thousand = 9000 (A) · Round 290 to the nearest ten = 290 (D) · Round 2,309 to the nearest thousand = 2000 (L) · Round 538 to the nearest hundred = 500 (K) · Round 17 to the nearest ten = 20 (R) · Round 908 to the nearest hundred = 900 (E) · Round 1,701 to the nearest hundred = 1700 (M) · Round 90 to the nearest ten = 90 (N) · Round 127 to the nearest ten = 130 (S) · Round 2,266 to the nearest hundred = 2300 (O) · Round 190 to the nearest hundred = 200 (C)

Clue 3 (Word problems): "SUNLIT AMBER SHELL"

There were 124 starfish tokens. 12 were used up. How many starfish tokens are left? = 112 (S) · Reef Scout lined up 7 rows of 9 sea shells. How many sea shells in all? = 63 (U) · Reef Scout found 10 starfish tokens yesterday and 2 more today. How many starfish tokens in all? = 12 (L) · There were 67 starfish tokens. 24 were used up. How many starfish tokens are left? = 43 (N) · There were 143 glowing pearls. 40 were used up. How many glowing pearls are left? = 103 (A) · There were 121 kelp bundles. 39 were used up. How many kelp bundles are left? = 82 (T) · Reef Scout found 30 coral gems yesterday and 28 more today. How many coral gems in all? = 58 (I)

Clue 4 (Fractions of a number): "EMERALD FIN SCALES WERE DROPPED AT THE GATE"

1/3 of 81 = 27 (E) · 4/6 of 48 = 32 (P) · 1/10 of 150 = 15 (A) · 5/10 of 16 = 8 (N) · 2/8 of 56 = 14 (R) · 5/6 of 6 = 5 (W) · 3/8 of 16 = 6 (O) · 1/5 of 65 = 13 (T) · 5/8 of 40 = 25 (H) · 3/4 of 4 = 3 (L) · 1/4 of 104 = 26 (F) · 1/4 of 156 = 39 (M) · 2/10 of 50 = 10 (S) · 1/3 of 12 = 4 (C) · 1/2 of 60 = 30 (G) · 1/4 of 68 = 17 (I) · 4/8 of 62 = 31 (D)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Coralia Reef

12 ÷ 12 = 1 · 50 ÷ 10 = 5 · 56 ÷ 8 = 7 · 30 ÷ 3 = 10 · 4 ÷ 1 = 4 · 18 ÷ 2 = 9 · 4 ÷ 2 = 2 · 96 ÷ 12 = 8 · 72 ÷ 6 = 12 · 18 ÷ 6 = 3 · 18 ÷ 3 = 6