



The Case of the Missing Pearl

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

Detective: _____ **Date:** _____

Someone has stolen the Magic Rainbow Pearl from the Royal Shell! Without it, Pearl Cove will lose its warm glow. As the chief sea detective, you must follow the clues and find the bubble-burglar before the lights go out.

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 bubble-burglar is _____

Possible suspects

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

NAME	OCEAN MAGIC	SEA ANIMAL ALLY	SWIMMING STYLE	SEAWEED CROWN	ALLERGIC TO
Andrina	wave control	turtle ride	left fin swimmer	golden sea-grass	noisy clam snaps
Nixie	current speed	crab guard	left fin swimmer	golden sea-grass	sour lemon-kelp
Alana	current speed	dolphin scout	left fin swimmer	golden sea-grass	noisy clam snaps
Aquata	bubble shield	turtle ride	left fin swimmer	bright red algae	noisy clam snaps
Pearl	tide whisper	turtle ride	right fin swimmer	golden sea-grass	noisy clam snaps
Mimmi	tide whisper	crab guard	left fin swimmer	golden sea-grass	noisy clam snaps
Lyla	coral growth	turtle ride	left fin swimmer	golden sea-grass	noisy clam snaps
Arista	bubble shield	dolphin scout	left fin swimmer	golden sea-grass	noisy clam snaps
Rikki	current speed	turtle ride	left fin swimmer	golden sea-grass	noisy clam snaps
Adella	bubble shield	jellyfish light	right fin swimmer	bright red algae	sour lemon-kelp
Marina	current speed	turtle ride	right fin swimmer	bright red algae	noisy clam snaps
Sirena	coral growth	crab guard	right fin swimmer	golden sea-grass	tickly sea urchins
Emma	tide whisper	jellyfish light	left fin swimmer	neon green kelp	sour lemon-kelp
Bella	current speed	crab guard	right fin swimmer	bright red algae	noisy clam snaps
Ariel	current speed	dolphin scout	right fin swimmer	golden sea-grass	noisy clam snaps
Melody	current speed	turtle ride	left fin swimmer	bright red algae	noisy clam snaps
Waverly	current speed	crab guard	right fin swimmer	golden sea-grass	tickly sea urchins
Nerida	wave control	crab guard	right fin swimmer	bright red algae	tickly sea urchins
Attina	wave control	jellyfish light	left fin swimmer	golden sea-grass	sour lemon-kelp
Cleo	current speed	octopus helper	right fin swimmer	neon green kelp	sour lemon-kelp
Shelly	bubble shield	turtle ride	left fin swimmer	golden sea-grass	sour lemon-kelp

CLUE 1

Rounding

Our submarine radar only shows rounded numbers. We must round the sonar pings to find where the thief went.

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

T														
1700	4300	430	3700	370	30	30	230	370	1100	4300	230	90	1100	1300
900	1300	30	20	4300	370	1100	90	290	1300	50	1700			

Round 1,737 to the nearest hundred

→

T

Round 3,741 to the nearest hundred

→

V

Round 89 to the nearest ten

→

S

Round 1,149 to the nearest hundred

→

N

Round 293 to the nearest ten

→

C

Round 24 to the nearest ten

→

P

Round 371 to the nearest ten

→

I

Round 33 to the nearest ten

→

L

Round 430 to the nearest ten

→

E

Round 226 to the nearest ten

→

A

Round 52 to the nearest ten

→

U

Round 864 to the nearest hundred

→

D

Round 1,251 to the nearest hundred

→

O

Round 4,343 to the nearest hundred

→

H

Scratch space:

CLUE 2

We found three bags of stolen pearls on the seafloor. Let's add them up to find the next clue.

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

5220 9655 7636 3221 6988 8911 8911 3516 6988 2619 8515 4677 6988 3523 8515 4677 6988 5220 9655



$$2421 + 2799 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$1072 + 2149 = \boxed{} \rightarrow \mathbf{v}$$

$$878 + 1741 = \boxed{} \rightarrow \boxed{\mathbf{N}}$$

$$2863 + 1814 = \boxed{} \rightarrow \boxed{\text{W}}$$

$4093 + 3543 = \boxed{} \rightarrow \boxed{\text{E}}$

$$2146 + 1377 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$2362 + 1154 = \boxed{} \rightarrow \boxed{\mathbf{A}}$$

$$2442 + 2502 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$5386 + 3129 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$3586 + 5325 = \boxed{} \rightarrow \boxed{\text{L}}$$

$1698 + 1809 = \boxed{} \rightarrow \boxed{\text{F}}$

$$3570 + 6085 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4629 + 2359 = \boxed{} \rightarrow \boxed{}$$

Scratch space:

CLUE 3
Subtraction

The thief dropped a chest of sea coins. Subtract the broken coins from the total to solve this part.

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

N										N								
5872	3531	2105	8903	8399	6606	1886	2109	7602	8903	5872	2109	2363	8903	5421	2105	1886	1886	
8903	6606	2109	8607	1326	2429	1784	1326	8607	3531	4496	4496	1326	8607					

$10221 - 4349 = \square \rightarrow \text{N}$

$8189 - 1583 = \square \rightarrow \text{C}$

$6507 - 2011 = \square \rightarrow \text{B}$

$5388 - 3025 = \square \rightarrow \text{P}$

$6916 - 4811 = \square \rightarrow \text{I}$

$12140 - 3237 = \square \rightarrow \text{S}$

$7420 - 4991 = \square \rightarrow \text{T}$

$10363 - 4942 = \square \rightarrow \text{W}$

$2900 - 791 = \square \rightarrow \text{A}$

$2516 - 732 = \square \rightarrow \text{H}$

$10935 - 2328 = \square \rightarrow \text{R}$

$8583 - 184 = \square \rightarrow \text{Y}$

$10966 - 3364 = \square \rightarrow \text{M}$

$4858 - 2972 = \square \rightarrow \text{L}$

$5586 - 4260 = \square \rightarrow \text{E}$

$7160 - 3629 = \square \rightarrow \text{O}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The path is blocked by rows of glowing jellyfish. Multiply the rows to find a safe way through.

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

G						G	G						G				
14	72	49	35	60	15	14	14	49	72	4	66	15	14	81	30	70	70

56	66	72	72	49	15	144	121	66	56	72	49	49	81	

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

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

$9 \times 8 = \square \rightarrow \text{L}$

$11 \times 6 = \square \rightarrow \text{E}$

$7 \times 7 = \square \rightarrow \text{O}$

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

$5 \times 12 = \square \rightarrow \text{I}$

$10 \times 7 = \square \rightarrow \text{S}$

$6 \times 5 = \square \rightarrow \text{A}$

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

$3 \times 5 = \square \rightarrow \text{N}$

$11 \times 11 = \square \rightarrow \text{H}$

$12 \times 12 = \square \rightarrow \text{T}$

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

Scratch space:

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

We need to split our bubble-juices equally among the team to keep swimming. Divvy them up to crack 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:

$63 \div 7 = \boxed{}$

$70 \div 10 = \boxed{}$

$72 \div 6 = \boxed{}$

$50 \div 10 = \boxed{}$

$16 \div 2 = \boxed{}$

$120 \div 12 = \boxed{}$

$121 \div 11 = \boxed{}$

$6 \div 1 = \boxed{}$

$36 \div 12 = \boxed{}$

$12 \div 3 = \boxed{}$

$10 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain creates a wild wave control, then swims away on a turtle ride.
2. The villain speeds up the coral growth, then blocks the path with a crab guard.
3. The villain whispers a magic tide whisper, then swims away on a turtle ride.
4. The villain creates a wild wave control, then blocks the path with a crab guard.
5. The villain creates a wild wave control, then grabs the loot with an octopus helper.
6. The villain conjures a bubble shield, then escapes with a dolphin scout.
7. The villain speeds up the coral growth, then swims away on a turtle ride.
8. The villain activates a fast current speed, then sees in the dark with a jellyfish light.
9. The villain whispers a magic tide whisper, then blocks the path with a crab guard.
10. The villain creates a wild wave control, then sees in the dark with a jellyfish light.
11. The villain conjures a bubble shield, then sees in the dark with a jellyfish light.
12. The villain activates a fast current speed, then swims away on a turtle ride.

Answer Key

The Case of the Missing Pearl

Culprit: Andrina

wave control · turtle ride · left fin swimmer · golden sea-grass · noisy clam snaps

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN HAS NO DOLPHIN SCOUT"

Round 1,737 to the nearest hundred = 1700 (T) · Round 3,741 to the nearest hundred = 3700 (V) · Round 89 to the nearest ten = 90 (S) · Round 1,149 to the nearest hundred = 1100 (N) · Round 293 to the nearest ten = 290 (C) · Round 24 to the nearest ten = 20 (P) · Round 371 to the nearest ten = 370 (I) · Round 33 to the nearest ten = 30 (L) · Round 430 to the nearest ten = 430 (E) · Round 226 to the nearest ten = 230 (A) · Round 52 to the nearest ten = 50 (U) · Round 864 to the nearest hundred = 900 (D) · Round 1,251 to the nearest hundred = 1300 (O) · Round 4,343 to the nearest hundred = 4300 (H)

Clue 2 (Addition): "THE VILLAIN SWIMS WITH THEIR LEFT FIN"

$2421 + 2799 = 5220$ (T) · $1072 + 2149 = 3221$ (V) · $878 + 1741 = 2619$ (N) · $2863 + 1814 = 4677$ (W) · $4093 + 3543 = 7636$ (E) · $2146 + 1377 = 3523$ (M) · $2362 + 1154 = 3516$ (A) · $2442 + 2502 = 4944$ (R) · $5386 + 3129 = 8515$ (S) · $3586 + 5325 = 8911$ (L) · $1698 + 1809 = 3507$ (F) · $3570 + 6085 = 9655$ (H) · $4629 + 2359 = 6988$ (I)

Clue 3 (Subtraction): "NOISY CLAM SNAPS WILL SCARE THE ROBBER"

$10221 - 4349 = 5872$ (N) · $8189 - 1583 = 6606$ (C) · $6507 - 2011 = 4496$ (B) · $5388 - 3025 = 2363$ (P) · $6916 - 4811 = 2105$ (I) · $12140 - 3237 = 8903$ (S) · $7420 - 4991 = 2429$ (T) · $10363 - 4942 = 5421$ (W) · $2900 - 791 = 2109$ (A) · $2516 - 732 = 1784$ (H) · $10935 - 2328 = 8607$ (R) · $8583 - 184 = 8399$ (Y) · $10966 - 3364 = 7602$ (M) · $4858 - 2972 = 1886$ (L) · $5586 - 4260 = 1326$ (E) · $7160 - 3629 = 3531$ (O)

Clue 4 (Multiplication facts (1-12)): "GLOWING GOLDEN GRASS FELL ON THE FLOOR"

$7 \times 2 = 14$ (G) · $5 \times 7 = 35$ (W) · $9 \times 8 = 72$ (L) · $11 \times 6 = 66$ (E) · $7 \times 7 = 49$ (O) · $7 \times 8 = 56$ (F) · $5 \times 12 = 60$ (I) · $10 \times 7 = 70$ (S) · $6 \times 5 = 30$ (A) · $9 \times 9 = 81$ (R) · $3 \times 5 = 15$ (N) · $11 \times 11 = 121$ (H) · $12 \times 12 = 144$ (T) · $2 \times 2 = 4$ (D)

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

$63 \div 7 = 9$ · $70 \div 10 = 7$ · $72 \div 6 = 12$ · $50 \div 10 = 5$ · $16 \div 2 = 8$ · $120 \div 12 = 10$ · $121 \div 11 = 11$ · $6 \div 1 = 6$ · $36 \div 12 = 3$ · $12 \div 3 = 4$ · $10 \div 5 = 2$