



The Mystery of the Coral Cavern

Grade 5 math · Place value, Addition, Subtraction, Multiplication, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

A mysterious intruder swam into the Royal Grotto and snatched the Great Pearl of Coral Cove! Detective Finn needs your help to decode the evidence and unmask the culprit.

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 finned thief is _____

Possible suspects

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

NAME	TAIL MAGIC	ARTIFACT	WRIST CUFF	SCALE COLOR	WEAKNESS
Thalassa	kelp whip	prism trident	right arm cuff	sapphire scales	bright sunlight
Ronne	sonic song	sea glass ring	right arm cuff	emerald scales	bright sunlight
Waverly	current burst	starfish star	left arm cuff	ruby scales	bright sunlight
Coralie	bubble shield	pearl wand	right arm cuff	emerald scales	bright sunlight
Triton	bubble shield	starfish star	left arm cuff	sapphire scales	bright sunlight
Cordelia	tide wave	sea glass ring	right arm cuff	sapphire scales	bright sunlight
Nerida	tide wave	starfish star	right arm cuff	sapphire scales	bright sunlight
Marina	tide wave	starfish star	right arm cuff	emerald scales	bright sunlight
Electra	kelp whip	pearl wand	right arm cuff	sapphire scales	dry sponge
Reef	kelp whip	shell compass	right arm cuff	ruby scales	loud applause
Kailani	tide wave	starfish star	left arm cuff	sapphire scales	bright sunlight
Nixie	tide wave	prism trident	left arm cuff	emerald scales	loud applause
Delphine	kelp whip	shell compass	right arm cuff	sapphire scales	bright sunlight
Nautilus	current burst	shell compass	left arm cuff	ruby scales	bright sunlight
Caspian	sonic song	shell compass	left arm cuff	ruby scales	bright sunlight
Tursi	sonic song	shell compass	left arm cuff	emerald scales	dry sponge
Harbor	current burst	pearl wand	right arm cuff	sapphire scales	bright sunlight
Finnegan	bubble shield	pearl wand	left arm cuff	sapphire scales	bright sunlight
Pearl	sonic song	pearl wand	right arm cuff	emerald scales	loud applause
Calder	bubble shield	shell compass	left arm cuff	ruby scales	bright sunlight
Oceanus	kelp whip	starfish star	left arm cuff	sapphire scales	loud applause

CLUE 1

The guard examined the glowing sonar readout to check the target digit position.

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

A number line from 0 to 10,000 with various numbers marked in boxes. The numbers are: 5000, 9000, 200, 3000, 800, 700, 700, 30, 800, 50, 400, 60, 200, 90, 50, 60, 5000, 600, 90, 200, 30, 90, 9000, 200, 700, 700, 2000, 60, 1000, 8000, 30, 90, 90. The number 5000 is highlighted in orange.

What is the value of the 5 in 825,968? → **T**

What is the value of the 7 in 889,793? → **L**

What is the value of the 2 in 917,294? → **E**

What is the value of the 9 in 680,596? → **S**

What is the value of the 3 in 240,239? → **A**

What is the value of the 8 in 958,940? → **P**

What is the value of the 4 in 89,462? → **D**

What is the value of the 1 in 301,979? → **M**

What is the value of the 8 in 51,854? → **I**

What is the value of the 3 in 13,025? → **V**

What is the value of the 2 in 82,936? → **C**

What is the value of the 9 in 69,441? → **H**

What is the value of the 5 in 313,257? → **N**

What is the value of the 6 in 70,695? → **U**

What is the value of the 6 in 18,564? → ☒ 6

Scratch space:

CLUE 2 Addition

Detective Finn tallied up the total number of glowing pearls collected across the reef sectors.

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

T									T					
5486	8712	2454	9472	6553	9472	9228	2454	6931	5486	7959	8187	3130	2454	7457

										T						T		
9472	8712	9513	5482	8297	6931	6553	3304	3304	8187	5482	5486	8712	2454	3130	9513	6231	8712	5486

7457	3130	5788

$3771 + 1715 = \div \rightarrow \div$	$1730 + 3752 = \div \rightarrow \div$	$4224 + 3233 = \div \rightarrow \div$
$5600 + 3628 = \div \rightarrow \div$	$2619 + 4312 = \div \rightarrow \div$	$4601 + 3696 = \div \rightarrow \div$
$1556 + 1574 = \div \rightarrow \div$	$3122 + 3431 = \div \rightarrow \div$	$3259 + 4700 = \div \rightarrow \div$
$5163 + 3024 = \div \rightarrow \div$	$6051 + 3421 = \div \rightarrow \div$	$3738 + 2050 = \div \rightarrow \div$
$4619 + 4894 = \div \rightarrow \div$	$1198 + 2106 = \div \rightarrow \div$	$5525 + 3187 = \div \rightarrow \div$
$1256 + 1198 = \div \rightarrow \div$	$2126 + 4105 = \div \rightarrow \div$	

Scratch space:

Subtraction

The guards calculated the remaining distance after subtracting the speed of the ocean currents.

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

$$6712 - 4989 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$7812 - 2880 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$11872 - 3551 = \boxed{} \rightarrow \boxed{0}$$

$$8820 - 4082 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$10002 - 1901 = \boxed{} \rightarrow \boxed{\mathbf{M}}$$

$$11279 - 2761 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$9211 - 728 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$10162 - 1599 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$8918 - 2131 = \boxed{} \rightarrow \boxed{\text{C}}$$

$6418 - 2803 = \boxed{} \rightarrow \boxed{\mathbf{G}}$

$$2883 - 262 = \boxed{} \rightarrow \boxed{\mathbf{B}}$$

$$3424 - 920 = \boxed{} \rightarrow \boxed{\mathbf{F}}$$

$10043 - 3700 = \boxed{} \rightarrow \boxed{I}$

$$4767 - 3506 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

$$5038 - 3965 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$6008 - 2532 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$$7242 - 2490 = \boxed{} \rightarrow \boxed{\text{R}}$$

9381 - 469 = → **E**

Scratch space:

CLUE 4

Multiplication facts (1-12)

The squad organized the kelp patrols into equal rows to compute the total search area.

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

S								S					S
14	5	72	72	66	54	33	32	14	15	5	36	32	14

S														S					
14	66	54	80	80	32	33	32	144	54	11	12	66	32	14	32	5	30	32	144

S			
14	5	11	144

$7 \times 2 = \square \rightarrow \boxed{\text{S}}$

$3 \times 5 = \square \rightarrow \boxed{\text{C}}$

$12 \times 12 = \square \rightarrow \boxed{\text{D}}$

$1 \times 5 = \square \rightarrow \boxed{\text{A}}$

$6 \times 9 = \square \rightarrow \boxed{\text{I}}$

$4 \times 8 = \square \rightarrow \boxed{\text{E}}$

$10 \times 8 = \square \rightarrow \boxed{\text{M}}$

$1 \times 12 = \square \rightarrow \boxed{\text{T}}$

$5 \times 6 = \square \rightarrow \boxed{\text{B}}$

$6 \times 6 = \square \rightarrow \boxed{\text{L}}$

$6 \times 12 = \square \rightarrow \boxed{\text{P}}$

$3 \times 11 = \square \rightarrow \boxed{\text{R}}$

$11 \times 1 = \square \rightarrow \boxed{\text{N}}$

$6 \times 11 = \square \rightarrow \boxed{\text{H}}$

Scratch space:

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

The reef team split the total treasure chests equally among the safe vaults.

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:

$20 \div 4 = \boxed{}$

$100 \div 10 = \boxed{}$

$9 \div 1 = \boxed{}$

$11 \div 11 = \boxed{}$

$12 \div 3 = \boxed{}$

$28 \div 4 = \boxed{}$

$84 \div 7 = \boxed{}$

$36 \div 12 = \boxed{}$

$8 \div 4 = \boxed{}$

$8 \div 1 = \boxed{}$

$48 \div 8 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swung a kelp whip, then consulted a shell compass.
2. The villain cast a bubble shield, then glowing with a sea glass ring.
3. The villain cast a bubble shield, then waved a pearl wand.
4. The villain swung a kelp whip, then glowing with a sea glass ring.
5. The villain created a tide wave, then glowing with a sea glass ring.
6. The villain summoned a current burst, then threw a starfish star.
7. The villain swung a kelp whip, then threw a starfish star.
8. The villain summoned a current burst, then glowing with a sea glass ring.
9. The villain created a tide wave, then threw a starfish star.
10. The villain summoned a current burst, then waved a pearl wand.
11. The villain swung a kelp whip, then flashed a prism trident.
12. The villain blasted a sonic song, then glowing with a sea glass ring.

Answer Key

The Mystery of the Coral Cavern

Culprit: Thalassa

kelp whip · prism trident · right arm cuff · sapphire scales · bright sunlight

Trail: Start 21 → Clue 1 15 → Clue 2 9 → Clue 3 7 → Clue 4 4 → Clue 5 1

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

What is the value of the 5 in 825,968? = 5000 (T) · What is the value of the 7 in 889,793? = 700 (L) · What is the value of the 2 in 917,294? = 200 (E) · What is the value of the 9 in 680,596? = 90 (S) · What is the value of the 3 in 240,239? = 30 (A) · What is the value of the 8 in 958,940? = 8000 (P) · What is the value of the 4 in 89,462? = 400 (D) · What is the value of the 1 in 301,979? = 1000 (M) · What is the value of the 8 in 51,854? = 800 (I) · What is the value of the 3 in 13,025? = 3000 (V) · What is the value of the 2 in 82,936? = 2000 (C) · What is the value of the 9 in 69,441? = 9000 (H) · What is the value of the 5 in 313,257? = 50 (N) · What is the value of the 6 in 70,695? = 600 (U) · What is the value of the 6 in 18,564? = 60 (O)

Clue 2 (Addition): "THE SUSPECT WORE A SHINY CUFF ON THE RIGHT ARM"

$3771 + 1715 = 5486$ (T) · $1730 + 3752 = 5482$ (N) · $4224 + 3233 = 7457$ (A) · $5600 + 3628 = 9228$ (P) · $2619 + 4312 = 6931$ (C) · $4601 + 3696 = 8297$ (Y) · $1556 + 1574 = 3130$ (R) · $3122 + 3431 = 6553$ (U) · $3259 + 4700 = 7959$ (W) · $5163 + 3024 = 8187$ (O) · $6051 + 3421 = 9472$ (S) · $3738 + 2050 = 5788$ (M) · $4619 + 4894 = 9513$ (I) · $1198 + 2106 = 3304$ (F) · $5525 + 3187 = 8712$ (H) · $1256 + 1198 = 2454$ (E) · $2126 + 4105 = 6231$ (G)

Clue 3 (Subtraction): "THE SNEAKY THIEF SHRANK BACK FROM BRIGHT SUNLIGHT"

$6712 - 4989 = 1723$ (T) · $7812 - 2880 = 4932$ (H) · $11872 - 3551 = 8321$ (O) · $8820 - 4082 = 4738$ (N) · $10002 - 1901 = 8101$ (M) · $11279 - 2761 = 8518$ (S) · $9211 - 728 = 8483$ (K) · $10162 - 1599 = 8563$ (A) · $8918 - 2131 = 6787$ (C) · $6418 - 2803 = 3615$ (G) · $2883 - 262 = 2621$ (B) · $3424 - 920 = 2504$ (F) · $10043 - 3700 = 6343$ (I) · $4767 - 3506 = 1261$ (U) · $5038 - 3965 = 1073$ (L) · $6008 - 2532 = 3476$ (Y) · $7242 - 2490 = 4752$ (R) · $9381 - 469 = 8912$ (E)

Clue 4 (Multiplication facts (1-12)): "SAPPHIRE SCALES SHIMMERED IN THE SEABED SAND"

$7 \times 2 = 14$ (S) · $3 \times 5 = 15$ (C) · $12 \times 12 = 144$ (D) · $1 \times 5 = 5$ (A) · $6 \times 9 = 54$ (I) · $4 \times 8 = 32$ (E) · $10 \times 8 = 80$ (M) · $1 \times 12 = 12$ (T) · $5 \times 6 = 30$ (B) · $6 \times 6 = 36$ (L) · $6 \times 12 = 72$ (P) · $3 \times 11 = 33$ (R) · $11 \times 1 = 11$ (N) · $6 \times 11 = 66$ (H)

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

$20 \div 4 = 5$ · $100 \div 10 = 10$ · $9 \div 1 = 9$ · $11 \div 11 = 1$ · $12 \div 3 = 4$ · $28 \div 4 = 7$ · $84 \div 7 = 12$ · $36 \div 12 = 3$ · $8 \div 4 = 2$ · $8 \div 1 = 8$ · $48 \div 8 = 6$