



The Mystery of the Golden Pearl

Grade 6 math · Place value, Multiplication, Multi-step word problems, Word problems, Division · Reading level grades 3-4

Detective: _____ Date: _____

The legendary Golden Pearl of Coral Cove has been stolen! The Royal Reef Keeper is devastated and needs your help. The coral crook left a trail of clues across the glowing sea floor. Swim fast and use your math skills to help the Coral Patrol track down the 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 coral crook is _____

Possible suspects

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

NAME	MAIN MAGIC	SEABED SKILL	SWIMMING STYLE	HAIR TYPE	FEAR
Nerida	wave blast	jellyfish sting	right-finned	starfish orange	bright light
Triton	coral shield	clam dig	left-finned	starfish orange	tickle feather
Sandy	kelp tangle	clam dig	right-finned	seaweed green	loud whistle
Coral	kelp tangle	sonic song	right-finned	starfish orange	bright light
Brooke	kelp tangle	sonic song	left-finned	starfish orange	tickle feather
Delphine	coral shield	jellyfish sting	right-finned	seaweed green	tickle feather
Marina	coral shield	starfish climb	left-finned	starfish orange	loud whistle
Sirena	wave blast	clam dig	left-finned	starfish orange	tickle feather
Hali	kelp tangle	sonic song	left-finned	seaweed green	tickle feather
Shelly	kelp tangle	clam dig	right-finned	seaweed green	bright light
Kai	bubble trap	jellyfish sting	left-finned	starfish orange	tickle feather
Tallulah	kelp tangle	jellyfish sting	left-finned	seaweed green	loud whistle
Morgan	kelp tangle	starfish climb	left-finned	anemone pink	loud whistle
Ursula	bubble trap	jellyfish sting	right-finned	seaweed green	bright light
Pearl	bubble trap	sonic song	right-finned	starfish orange	tickle feather
Wave	whirlpool spin	jellyfish sting	right-finned	starfish orange	loud whistle
Pacifica	coral shield	clam dig	left-finned	seaweed green	tickle feather
Caspian	coral shield	sonic song	left-finned	starfish orange	tickle feather
Coralia	whirlpool spin	sonic song	right-finned	anemone pink	bright light
Aqua	coral shield	fish speak	left-finned	anemone pink	bright light
Finley	bubble trap	clam dig	left-finned	anemone pink	bright light

CLUE 1

A glowing starfish points to a secret map on the wall. The map uses large numbers to show the path of the thief. Look at the place value of the digits to unlock the first clue.

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

What is the value of the 1 in 91,700? → **T**

What is the value of the 7 in 11,976? → **H**

What is the value of the 5 in 37,350? → **S**

What is the value of the 3 in 255,368? → **K**

What is the value of the 8 in 396,873? → **V**

What is the value of the 6 in 804,692? → **N**

What is the value of the 5 in 695,449? → **D**

What is the value of the 1 in 68,919? → **G**

What is the value of the 3 in 53,405? → **J**

What is the value of the 2 in 535,923? → **F**

What is the value of the 5 in 976,543? → **R**

What is the value of the 6 in 713,869? → **C**

What is the value of the 4 in 83,941? → **L**

What is the value of the 7 in 57,281? → **E**

What is the value of the 2 in 912,761? → **A**

What is the value of the 4 in 64,323? →

What is the value of the 3 in 69,438? → **C**

What is the value of the 1 in 664,149? → **Y**

Scratch space:

Multiplication facts (1-12)

The thief left tail prints in neat rows on the sandy floor. Count the rows and multiply them to see where they swam next. Solving this will reveal the thief's swimming style.

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

The diagram consists of two rows of boxes, each containing a number. The top row has 14 boxes with numbers 121, 12, 54, 4, 80, 18, 18, 56, 64, 24, 50, 99, 64, 24, 50, 121, 12. The bottom row has 14 boxes with numbers 121, 12, 54, 3, 54, 60, 121, 60, 50, 36, 18, 36, 3, 110. The boxes containing 121 are highlighted in orange.

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

$$8 \times 7 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$9 \times 11 = \boxed{} \rightarrow \boxed{\text{M}}$$

$3 \times 8 = \square \rightarrow \mathbf{W}$

$10 \times 8 = \boxed{} \rightarrow \boxed{\text{R}}$

$$11 \times 10 = \boxed{} \rightarrow \boxed{\text{Y}}$$

$$5 \times 12 = \boxed{} \rightarrow \boxed{\text{F}}$$

$4 \times 1 = \square \rightarrow \boxed{\mathbf{C}}$

$$6 \times 2 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$3 \times 6 = \boxed{} \rightarrow \boxed{0}$$

$1 \times 3 = \square \rightarrow \boxed{\mathbf{L}}$

$$10 \times 5 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$8 \times 8 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$$4 \times 9 = \boxed{} \rightarrow \boxed{\text{N}}$$

$9 \times 6 = \boxed{} \rightarrow \boxed{\text{E}}$

Scratch space:

CLUE 4

Word problems

We found some dropped treasure boxes near the coral reef. If we solve the word problem about these lost items, we can find a clue about the thief's hair color.

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

A strand of S S O N G E hair turned up at the scene.

Coralia found 49 starfish yesterday and 25 more today. How many starfish in all?

Answer: → S

There were 29 sea pearls. 20 were used up. How many sea pearls are left?

Answer: → H

There were 68 sea pearls. 16 were used up. How many sea pearls are left?

Answer: → R

There were 57 sea glass. 40 were used up. How many sea glass are left?

Answer: → I

Coralia found 38 clamshells yesterday and 79 more today. How many clamshells in all?

Answer: → T

Coralia found 81 sea glass yesterday and 12 more today. How many sea glass in all?

Answer: → F

Coralia lined up 6 rows of 6 kelp cakes. How many kelp cakes in all?

Answer: → A

Scratch space:

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

The Coral Patrol needs to share their search gear evenly among the team. Split the rescue rings into equal groups 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:

$24 \div 12 = \square$

$84 \div 7 = \square$

$64 \div 8 = \square$

$32 \div 8 = \square$

$36 \div 6 = \square$

$100 \div 10 = \square$

$108 \div 12 = \square$

$63 \div 9 = \square$

$36 \div 12 = \square$

$30 \div 6 = \square$

$22 \div 2 = \square$

Step 2 - cross out the sentence with each answer:

1. The villain tangles paths with kelp, then sings a loud sonic song.
2. The villain blocks doors with coral, then sings a loud sonic song.
3. The villain blasts guards with waves, then sings a loud sonic song.
4. The villain blasts guards with waves, then climbs walls with starfish.
5. The villain spins a giant whirlpool, then climbs walls with starfish.
6. The villain blocks doors with coral, then calls tiny fish for help.
7. The villain blasts guards with waves, then calls tiny fish for help.
8. The villain blocks doors with coral, then digs through sand with clams.
9. The villain tangles paths with kelp, then calls tiny fish for help.
10. The villain spins a giant whirlpool, then sings a loud sonic song.
11. The villain tangles paths with kelp, then stings locks with jellyfish.
12. The villain blasts guards with waves, then digs through sand with clams.

Answer Key

The Mystery of the Golden Pearl

Culprit: Brooke

kelp tangle · sonic song · left-finned · starfish orange · tickle feather

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE CROOK DOES NOT HAVE JELLYFISH STING"

What is the value of the 1 in 91,700? = 1000 (T) · What is the value of the 7 in 11,976? = 70 (H) · What is the value of the 5 in 37,350? = 50 (S) · What is the value of the 3 in 255,368? = 300 (K) · What is the value of the 8 in 396,873? = 800 (V) · What is the value of the 6 in 804,692? = 600 (N) · What is the value of the 5 in 695,449? = 5000 (D) · What is the value of the 1 in 68,919? = 10 (G) · What is the value of the 3 in 53,405? = 3000 (J) · What is the value of the 2 in 535,923? = 20 (F) · What is the value of the 5 in 976,543? = 500 (R) · What is the value of the 6 in 713,869? = 60 (O) · What is the value of the 4 in 83,941? = 40 (L) · What is the value of the 7 in 57,281? = 7000 (E) · What is the value of the 2 in 912,761? = 2000 (A) · What is the value of the 4 in 64,323? = 4000 (I) · What is the value of the 3 in 69,438? = 30 (C) · What is the value of the 1 in 664,149? = 100 (Y)

Clue 2 (Multiplication facts (1-12)): "THE CROOK SWIMS WITH THE LEFT FIN ONLY"

$11 \times 11 = 121$ (T) · $8 \times 7 = 56$ (K) · $9 \times 11 = 99$ (M) · $3 \times 8 = 24$ (W) · $10 \times 8 = 80$ (R) · $11 \times 10 = 110$ (Y) · $5 \times 12 = 60$ (F) · $4 \times 1 = 4$ (C) · $6 \times 2 = 12$ (H) · $3 \times 6 = 18$ (O) · $1 \times 3 = 3$ (L) · $10 \times 5 = 50$ (I) · $8 \times 8 = 64$ (S) · $4 \times 9 = 36$ (N) · $9 \times 6 = 54$ (E)

Clue 3 (Multi-step word problems): "TICKLE FEATHER"

Coralia earned 7 kelp cakes in each of 3 rounds, plus 11 bonus kelp cakes. Then 10 kelp cakes were lost. How many kelp cakes are left? = 22 (T) · There were 204 clamshells in all. 1 Guppy Scouts used 24 clamshells each. The other 2 Guppy Scouts shared the rest equally. How many clamshells did each of the other Guppy Scouts get? = 90 (F) · Coralia collected 168 sea pearls in the morning and 204 sea pearls in the afternoon, then split them equally among 6 Guppy Scouts. How many sea pearls did each get? = 62 (C) · There were 123 sea glass in all. 3 Guppy Scouts used 17 sea glass each. The other 6 Guppy Scouts shared the rest equally. How many sea glass did each of the other Guppy Scouts get? = 12 (E) · Coralia collected 124 kelp cakes in the morning and 74 kelp cakes in the afternoon, then split them equally among 3 Guppy Scouts. How many kelp cakes did each get? = 66 (K) · Coralia filled 2 boxes with 3 sea pearls each, then found 7 more sea pearls. How many sea pearls are there in all? = 13 (L) · Coralia collected 197 sea glass in the morning and 183 sea glass in the afternoon, then split them equally among 5 Guppy Scouts. How many sea glass did each get? = 76 (I)

Clue 4 (Word problems): "STARFISH ORANGE"

Coralia found 49 starfish yesterday and 25 more today. How many starfish in all? = 74 (S) · There were 29 sea pearls. 20 were used up. How many sea pearls are left? = 9 (H) · There were 68 sea pearls. 16 were used up. How many sea pearls are left? = 52 (R) · There were 57 sea glass. 40 were used up. How many sea glass are left? = 17 (I) · Coralia found 38 clamshells yesterday and 79 more today. How many clamshells in all? = 117 (T) · Coralia found 81 sea glass yesterday and 12 more today. How many sea glass in all? = 93 (F) · Coralia lined up 6 rows of 6 kelp cakes. How many kelp cakes in all? = 36 (A)

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

$24 \div 12 = 2$ · $84 \div 7 = 12$ · $64 \div 8 = 8$ · $32 \div 8 = 4$ · $36 \div 6 = 6$ · $100 \div 10 = 10$ · $108 \div 12 = 9$ · $63 \div 9 = 7$ · $36 \div 12 = 3$ · $30 \div 6 = 5$ · $22 \div 2 = 11$