



The Mystery of the Coral Crown

Grade 2 math · Addition, Subtraction, Place value, Skip counting, Missing addends · Reading level grades 1-2

Detective: _____ Date: _____

Oh no! Someone took the Queen's beautiful Coral Crown from the sand castle. The Reef is in trouble! We must find the sneaky mermaid who took it.

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 Crown Snatcher is _____

Possible suspects

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

NAME	SWIMMING TRICK	MAGIC ITEM	FAVORITE HAND	HAIR ACCESSORY	FEARS MOST
Glimmer	bubble blast	star wand	right handed	green kelp	loud singing
Nerida	kelp swing	crab shield	right handed	green kelp	tickly seaweed
Ariel	tide spin	crab shield	right handed	blue shell	loud singing
Melody	wave dash	star wand	right handed	green kelp	loud singing
Kelpy	tide spin	star wand	right handed	green kelp	bright light
Splash	wave dash	glow shell	left handed	blue shell	tickly seaweed
Marina	bubble blast	sea mirror	right handed	blue shell	tickly seaweed
Jewel	bubble blast	star wand	right handed	pink flower	tickly seaweed
Shelly	bubble blast	pearl ring	right handed	pink flower	bright light
Waverly	wave dash	pearl ring	right handed	pink flower	tickly seaweed
Storm	kelp swing	star wand	left handed	blue shell	loud singing
Finny	coral jump	star wand	left handed	blue shell	tickly seaweed
Starla	tide spin	pearl ring	right handed	green kelp	bright light
Misty	kelp swing	star wand	left handed	green kelp	tickly seaweed
Coralia	wave dash	sea mirror	left handed	blue shell	tickly seaweed
Bubbles	kelp swing	crab shield	left handed	pink flower	tickly seaweed
Aqua	kelp swing	sea mirror	right handed	blue shell	tickly seaweed
Bluebell	tide spin	glow shell	left handed	blue shell	tickly seaweed
Sunny	bubble blast	sea mirror	left handed	blue shell	bright light
Pearl	bubble blast	crab shield	left handed	blue shell	tickly seaweed
Sky	bubble blast	star wand	right handed	blue shell	tickly seaweed

CLUE 1 **Addition**

We need to count all the lost sea shells. The guard adds the white shells and the pink shells to get a total.

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

T			T											T				
39	91	26	39	91	22	26	84	32	94	26	56	23	94	39	91	88	30	26
88	56	26	88	59	22	67	67	94	67									

$22 + 17 = \square \rightarrow \text{T}$	$25 + 59 = \square \rightarrow \text{F}$	$13 + 9 = \square \rightarrow \text{I}$
$59 + 32 = \square \rightarrow \text{H}$	$9 + 21 = \square \rightarrow \text{V}$	$23 + 33 = \square \rightarrow \text{S}$
$15 + 17 = \square \rightarrow \text{D}$	$34 + 33 = \square \rightarrow \text{R}$	$17 + 9 = \square \rightarrow \text{E}$
$39 + 20 = \square \rightarrow \text{M}$	$53 + 35 = \square \rightarrow \text{A}$	$12 + 11 = \square \rightarrow \text{N}$
$45 + 49 = \square \rightarrow \text{O}$		

Scratch space:

CLUE 2 Subtraction

The sneaky thief took some pearls. We had many pearls but now some are gone. We subtract to see how many are missing.

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

T 74	57	37	T 74	57	17	37	72	54	11	29	T 74	37	32	87	29	T 74	37
54	17	T 74	57	T 74	57	37	63	37	72	T 74	57	32	87	23			

$111 - 37 = \square \rightarrow \boxed{\text{T}}$	$34 - 23 = \square \rightarrow \boxed{\text{R}}$	$69 - 12 = \square \rightarrow \boxed{\text{H}}$
$65 - 2 = \square \rightarrow \boxed{\text{L}}$	$33 - 4 = \square \rightarrow \boxed{\text{O}}$	$63 - 26 = \square \rightarrow \boxed{\text{E}}$
$34 - 2 = \square \rightarrow \boxed{\text{A}}$	$89 - 2 = \square \rightarrow \boxed{\text{N}}$	$86 - 14 = \square \rightarrow \boxed{\text{F}}$
$57 - 3 = \square \rightarrow \boxed{\text{W}}$	$35 - 12 = \square \rightarrow \boxed{\text{D}}$	$57 - 40 = \square \rightarrow \boxed{\text{I}}$

Scratch space:

CLUE 3 Place value

The crabs found clues in the sand. They sorted shiny stones into boxes of tens and ones.

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

T			T													T
45	12	11	45	12	83	11	20	34	50	11	11	80	11	94	33	45

T												
45	83	67	88	74	44	34	11	33	15	11	11	94

What number has 4 tens and 5 ones? → **T**

What number has 1 ten and 2 ones? → **H**

What number has 2 tens and 0 ones? → **F**

What number has 3 tens and 3 ones? → **A**

What number has 3 tens and 4 ones? → **S**

What number has 9 tens and 4 ones? → **D**

What number has 4 tens and 4 ones? → **Y**

What number has 6 tens and 7 ones? → **C**

What number has 8 tens and 0 ones? → **Z**

What number has 1 ten and 5 ones? → **W**

What number has 8 tens and 3 ones? → **I**

What number has 5 tens and 0 ones? → **N**

What number has 8 tens and 8 ones? → **K**

What number has 7 tens and 4 ones? → **L**

What number has 1 ten and 1 one? → **E**

Scratch space:

CLUE 4 Skip counting

Let us look at the starfish prints. We can count the starfish arms by skip counting by fives.

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

T																
26	20	8	27	80	9	15	45	80	30	100	21	50	55	36	30	8
							T									
15	20	8	36	36	90	100	26	20	8	15	50	100	21			

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 → **T**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 → **D**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 → **L**

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **S**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 → **O**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 → **A**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, __, 22, 24 → **H**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 → **I**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 → **B**

Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 → **E**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 → **F**

Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 → **U**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **C**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **N**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **P**

Scratch space:

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

The queen needs ten shiny pearls to fix her crown. She has seven pearls now. Let us find out how many more she needs.

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:

$3 + \underline{\quad} = 4$

$2 + \underline{\quad} = 7$

$3 + \underline{\quad} = 7$

$2 + \underline{\quad} = 12$

$6 + \underline{\quad} = 18$

$1 + \underline{\quad} = 12$

$2 + \underline{\quad} = 9$

$1 + \underline{\quad} = 7$

$10 + \underline{\quad} = 12$

$1 + \underline{\quad} = 9$

$4 + \underline{\quad} = 7$

Step 2 - cross out the sentence with each answer:

1. The villain did a fast tide spin, then shined a glow shell.
2. The villain took a big kelp swing, then waved a star wand.
3. The villain took a big kelp swing, then shined a glow shell.
4. The villain made a high coral jump, then waved a star wand.
5. The villain blew a bubble blast, then held a crab shield.
6. The villain blew a bubble blast, then waved a star wand.
7. The villain blew a bubble blast, then used a pearl ring.
8. The villain made a high coral jump, then shined a glow shell.
9. The villain did a fast wave dash, then shined a glow shell.
10. The villain did a fast wave dash, then waved a star wand.
11. The villain made a high coral jump, then dropped a sea mirror.
12. The villain did a fast tide spin, then used a pearl ring.

Answer Key

The Mystery of the Coral Crown

Culprit: Splash

wave dash · glow shell · left handed · blue shell · tickly seaweed

Trail: Start 21 → Clue 1 17 → Clue 2 7 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT HAVE A SEA MIRROR"

$22 + 17 = 39$ (T) · $25 + 59 = 84$ (F) · $13 + 9 = 22$ (I) · $59 + 32 = 91$ (H) · $9 + 21 = 30$ (V) · $23 + 33 = 56$ (S) · $15 + 17 = 32$ (D) · $34 + 33 = 67$ (R) · $17 + 9 = 26$ (E) · $39 + 20 = 59$ (M) · $53 + 35 = 88$ (A) · $12 + 11 = 23$ (N) · $45 + 49 = 94$ (O)

Clue 2 (Subtraction): "THE THIEF WROTE A NOTE WITH THE LEFT HAND"

$111 - 37 = 74$ (T) · $34 - 23 = 11$ (R) · $69 - 12 = 57$ (H) · $65 - 2 = 63$ (L) · $33 - 4 = 29$ (O) · $63 - 26 = 37$ (E) · $34 - 2 = 32$ (A) · $89 - 2 = 87$ (N) · $86 - 14 = 72$ (F) · $57 - 3 = 54$ (W) · $35 - 12 = 23$ (D) · $57 - 40 = 17$ (I)

Clue 3 (Place value): "THE THIEF SNEEZED AT TICKLY SEAWEEED"

What number has 4 tens and 5 ones? = 45 (T) · What number has 1 ten and 2 ones? = 12 (H) · What number has 2 tens and 0 ones? = 20 (F) · What number has 3 tens and 3 ones? = 33 (A) · What number has 3 tens and 4 ones? = 34 (S) · What number has 9 tens and 4 ones? = 94 (D) · What number has 4 tens and 4 ones? = 44 (Y) · What number has 6 tens and 7 ones? = 67 (C) · What number has 8 tens and 0 ones? = 80 (Z) · What number has 1 ten and 5 ones? = 15 (W) · What number has 8 tens and 3 ones? = 83 (I) · What number has 5 tens and 0 ones? = 50 (N) · What number has 8 tens and 8 ones? = 88 (K) · What number has 7 tens and 4 ones? = 74 (L) · What number has 1 ten and 1 one? = 11 (E)

Clue 4 (Skip counting): "THE COPS FOUND A BLUE SHELL IN THE SAND"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (D) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (L) · Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 = 15 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 = 50 (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, __, 22, 24 = 20 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (B) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (E) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (F) · Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 = 30 (U) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (C) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (N) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (P)

Clue 5 (Missing addends): surviving statement is box 9 → Splash

$3 + \underline{\quad} = 4 = 1$ · $2 + \underline{\quad} = 7 = 5$ · $3 + \underline{\quad} = 7 = 4$ · $2 + \underline{\quad} = 12 = 10$ · $6 + \underline{\quad} = 18 = 12$ · $1 + \underline{\quad} = 12 = 11$ · $2 + \underline{\quad} = 9 = 7$ · $1 + \underline{\quad} = 7 = 6$ · $10 + \underline{\quad} = 12 = 2$ · $1 + \underline{\quad} = 9 = 8$ · $4 + \underline{\quad} = 7 = 3$