



The Mystery of the Coral Crown

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

Detective: _____ Date: _____

A shiny crown has vanished from Rainbow Reef! The sweet sea-unicorns and pretty mermaids are all very sad. Coral the Reef Keeper needs your help. Solve the math puzzles to find out who took the crown!

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 sea-unicorn crook is _____

Possible suspects

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

NAME	MAGIC TRICK	SUPER SPELL	HANDEDNESS	HAIR COLOR	BIGGEST FEAR
Shelly	sings sweet shell songs	freezes warm water	holds wand in right hand	pastel pink mane	scared of loud frogs
Shimmer	makes bubbles fly	grows giant seaweed	holds wand in left hand	sparkly purple tail	cannot stand sour kelp
Ariel	sings sweet shell songs	makes super pink spark	holds wand in left hand	pastel pink mane	cannot stand sour kelp
Splash	talks to baby dolphins	summons jelly fish	holds wand in right hand	sparkly purple tail	cannot stand sour kelp
Pearl	sings sweet shell songs	summons jelly fish	holds wand in right hand	sparkly purple tail	scared of loud frogs
Daphne	glows in the dark	makes super pink spark	holds wand in right hand	pastel pink mane	cannot stand sour kelp
Daisy	glows in the dark	freezes warm water	holds wand in left hand	sparkly purple tail	cannot stand sour kelp
Glimmer	talks to baby dolphins	summons jelly fish	holds wand in right hand	neon blue hair	scared of loud frogs
Nova	glows in the dark	makes super pink spark	holds wand in right hand	sparkly purple tail	cannot stand sour kelp
Luna	talks to baby dolphins	heals broken shells	holds wand in left hand	pastel pink mane	sneezes around glitter
Sandy	creates rainbow bridges	heals broken shells	holds wand in left hand	neon blue hair	sneezes around glitter
Kiko	creates rainbow bridges	heals broken shells	holds wand in right hand	neon blue hair	scared of loud frogs
Skye	talks to baby dolphins	freezes warm water	holds wand in right hand	neon blue hair	scared of loud frogs
Coral	glows in the dark	makes super pink spark	holds wand in right hand	sparkly purple tail	sneezes around glitter
Sparkles	sings sweet shell songs	grows giant seaweed	holds wand in right hand	sparkly purple tail	cannot stand sour kelp
Twinkle	makes bubbles fly	freezes warm water	holds wand in right hand	pastel pink mane	sneezes around glitter
Melody	sings sweet shell songs	heals broken shells	holds wand in right hand	sparkly purple tail	cannot stand sour kelp
Jewel	sings sweet shell songs	heals broken shells	holds wand in left hand	neon blue hair	cannot stand sour kelp
Bella	glows in the dark	summons jelly fish	holds wand in right hand	sparkly purple tail	scared of loud frogs
Waverly	creates rainbow bridges	makes super pink spark	holds wand in left hand	neon blue hair	cannot stand sour kelp
Starla	creates rainbow bridges	makes super pink spark	holds wand in right hand	sparkly purple tail	cannot stand sour kelp

CLUE 1 Place value

We found a locked treasure chest near the sand. The lock needs us to find the number with five tens and three ones. Solve this place value puzzle to open it!

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

T																
12	91	70	58	44	70	29	39	48	25	11	13	13	29	11	44	
					T											
95	29	44	44	40	12	91	70	29	13	23	27	40	39	70	44	
58	91	70	13	13	58											

What number has 1 ten and 2 ones?

→

T

What number has 4 tens and 0 ones?

→

O

What number has 2 tens and 7 ones?

→

R

What number has 7 tens and 0 ones?

→

E

What number has 4 tens and 8 ones?

→

Y

What number has 1 ten and 3 ones?

→

L

What number has 1 ten and 1 one?

→

I

What number has 9 tens and 1 one?

→

H

What number has 3 tens and 9 ones?

→

K

What number has 2 tens and 9 ones?

→

A

What number has 2 tens and 3 ones?

→

B

What number has 9 tens and 5 ones?

→

C

What number has 2 tens and 5 ones?

→

V

What number has 4 tens and 4 ones?

→

N

What number has 5 tens and 8 ones?

→

S

Scratch space:

CLUE 2 Subtraction

The crook took some shiny sea glass from our pile. We had twelve pieces and now we only have eight. Subtract to find how many are gone and get a new clue!

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

T																	
51	13	36	74	28	67	54	55	14	67	17	55	13	37	17	55		

T									T							T
51	13	48	28	37	25	37	72	51	13	17	48	72	34	13	51	

13	17	25	54

$83 - 32 = \square \rightarrow \text{T}$	$45 - 32 = \square \rightarrow \text{H}$	$59 - 4 = \square \rightarrow \text{S}$
$51 - 23 = \square \rightarrow \text{O}$	$22 - 8 = \square \rightarrow \text{P}$	$29 - 12 = \square \rightarrow \text{A}$
$45 - 8 = \square \rightarrow \text{W}$	$83 - 11 = \square \rightarrow \text{I}$	$55 - 19 = \square \rightarrow \text{E}$
$36 - 2 = \square \rightarrow \text{G}$	$70 - 22 = \square \rightarrow \text{R}$	$59 - 5 = \square \rightarrow \text{D}$
$62 - 37 = \square \rightarrow \text{N}$	$112 - 38 = \square \rightarrow \text{C}$	$92 - 25 = \square \rightarrow \text{L}$

Scratch space:

CLUE 3

Let us walk along the pink path of starfish. We must skip count by fives to reach the cave safely. Count the starfish to find our next clue!

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

60 20 9

40 33 36 110

42 9 80 140

8 6 15 9

60 20 9

90 6 15

12 36 14

110 36 50

6 18 6 14

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, __, 65, 70 → **T**

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **K**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 → **P**

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 → **O**

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, , 18, 21 → **D**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, , 45, 50 → **S**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 → **R**

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

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

Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 → **A**

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

Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, 18 → **G**

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

Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 → **H**

Scratch space:

CLUE 4 Addition

The mermaids gathered some magic pearls and the unicorns brought some pink flowers. Add them together to see our total and find a hidden note!

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

W				W															
52	98	48	66	52	66	48	77	66	88	60	54	47	77	41	88	77	54	98	
									W										
56	66	63	54	63	73	56	39	98	52	66	56	98	88						

$35 + 17 = \square \rightarrow$ W	$18 + 42 = \square \rightarrow$ K	$22 + 32 = \square \rightarrow$ L
$46 + 27 = \square \rightarrow$ N	$34 + 14 = \square \rightarrow$ S	$20 + 21 = \square \rightarrow$ U
$36 + 62 = \square \rightarrow$ E	$27 + 50 = \square \rightarrow$ P	$11 + 28 = \square \rightarrow$ H
$23 + 24 = \square \rightarrow$ Y	$31 + 35 = \square \rightarrow$ A	$16 + 40 = \square \rightarrow$ T
$19 + 44 = \square \rightarrow$ I	$26 + 62 = \square \rightarrow$ R	

Scratch space:

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

We need ten shiny shells to open the magic gate. We only have six shells. How many more shells do we need?
Solve this to get 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:

$9 + \underline{\quad} = 20$

$6 + \underline{\quad} = 12$

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

$8 + \underline{\quad} = 10$

$10 + \underline{\quad} = 15$

$9 + \underline{\quad} = 19$

$9 + \underline{\quad} = 12$

$2 + \underline{\quad} = 3$

$4 + \underline{\quad} = 12$

$9 + \underline{\quad} = 18$

$10 + \underline{\quad} = 22$

Step 2 - cross out the sentence with each answer:

1. The villain built a bright rainbow bridge to cross the deep reef, then grew giant seaweed to block the path.
2. The villain sang a sweet shell song to sleep the guards, then called a school of jelly fish for help.
3. The villain whispered to baby dolphins for a fast ride, then froze the warm water into ice blocks.
4. The villain built a bright rainbow bridge to cross the deep reef, then sparked pink light to blind the cameras.
5. The villain sang a sweet shell song to sleep the guards, then sparked pink light to blind the cameras.
6. The villain sang a sweet shell song to sleep the guards, then grew giant seaweed to block the path.
7. The villain glowed brightly to see in the dark cove, then sparked pink light to blind the cameras.
8. The villain blew giant bubbles to float the safe away, then called a school of jelly fish for help.
9. The villain blew giant bubbles to float the safe away, then froze the warm water into ice blocks.
10. The villain built a bright rainbow bridge to cross the deep reef, then healed a broken clam shell to hide the key.
11. The villain whispered to baby dolphins for a fast ride, then called a school of jelly fish for help.
12. The villain blew giant bubbles to float the safe away, then sparked pink light to blind the cameras.

Answer Key

The Mystery of the Coral Crown

Culprit: Nova

glows in the dark · makes super pink spark · holds wand in right hand · sparkly purple tail · cannot stand sour kelp

Trail: Start 21 → Clue 1 16 → Clue 2 12 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE SNEAKY VILLAIN CANNOT HEAL BROKEN SHELLS"

What number has 1 ten and 2 ones? = 12 (T) · What number has 4 tens and 0 ones? = 40 (O) · What number has 2 tens and 7 ones? = 27 (R) · What number has 7 tens and 0 ones? = 70 (E) · What number has 4 tens and 8 ones? = 48 (Y) · What number has 1 ten and 3 ones? = 13 (L) · What number has 1 ten and 1 one? = 11 (I) · What number has 9 tens and 1 one? = 91 (H) · What number has 3 tens and 9 ones? = 39 (K) · What number has 2 tens and 9 ones? = 29 (A) · What number has 2 tens and 3 ones? = 23 (B) · What number has 9 tens and 5 ones? = 95 (C) · What number has 2 tens and 5 ones? = 25 (V) · What number has 4 tens and 4 ones? = 44 (N) · What number has 5 tens and 8 ones? = 58 (S)

Clue 2 (Subtraction): "THE COLD SPLASH WAS THROWN WITH A RIGHT HAND"

$83 - 32 = 51$ (T) · $45 - 32 = 13$ (H) · $59 - 4 = 55$ (S) · $51 - 23 = 28$ (O) · $22 - 8 = 14$ (P) · $29 - 12 = 17$ (A) · $45 - 8 = 37$ (W) · $83 - 11 = 72$ (I) · $55 - 19 = 36$ (E) · $36 - 2 = 34$ (G) · $70 - 22 = 48$ (R) · $59 - 5 = 54$ (D) · $62 - 37 = 25$ (N) · $112 - 38 = 74$ (C) · $92 - 25 = 67$ (L)

Clue 3 (Skip counting): "THE SOUR KELP MADE THE BAD GUY RUN AWAY"

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, __, 65, $70 = 60$ (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, $18 = 14$ (Y) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, $15 = 9$ (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, $48 = 42$ (K) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, $160 = 140$ (P) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, $70 = 50$ (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, $39 = 33$ (O) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, $42 = 36$ (U) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, __, 18, $21 = 15$ (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, $50 = 40$ (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, $130 = 110$ (R) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, $110 = 90$ (B) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, $100 = 80$ (L) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, $10 = 6$ (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, __, 20, $22 = 18$ (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, $18 = 12$ (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, $12 = 8$ (M) · Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, $30 = 20$ (H)

Clue 4 (Addition): "WE SAW A SPARKLY PURPLE TAIL IN THE WATER"

$35 + 17 = 52$ (W) · $18 + 42 = 60$ (K) · $22 + 32 = 54$ (L) · $46 + 27 = 73$ (N) · $34 + 14 = 48$ (S) · $20 + 21 = 41$ (U) · $36 + 62 = 98$ (E) · $27 + 50 = 77$ (P) · $11 + 28 = 39$ (H) · $23 + 24 = 47$ (Y) · $31 + 35 = 66$ (A) · $16 + 40 = 56$ (T) · $19 + 44 = 63$ (I) · $26 + 62 = 88$ (R)

Clue 5 (Missing addends): surviving statement is box 7 → Nova

$9 + \underline{\quad} = 20 = 11$ · $6 + \underline{\quad} = 12 = 6$ · $3 + \underline{\quad} = 7 = 4$ · $8 + \underline{\quad} = 10 = 2$ · $10 + \underline{\quad} = 15 = 5$ · $9 + \underline{\quad} = 19 = 10$ · $9 + \underline{\quad} = 12 = 3$ · $2 + \underline{\quad} = 3 = 1$ · $4 + \underline{\quad} = 12 = 8$ · $9 + \underline{\quad} = 18 = 9$ · $10 + \underline{\quad} = 22 = 12$