



The Case of the Missing Star Crystal

Grade 1 math · Addition, Subtraction, Skip counting, Place value, Missing addends · Reading level grades 3-4

Detective: _____ Date: _____

Someone swiped the glowing Star Crystal from Coral Crest Lagoon! The mermaids and sea unicorns are in a panic. Detective Splash takes the case to track down the sneaky 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 Coral Bandit is _____

Possible suspects

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

NAME	MAIN SKILL	MAGIC TRICK	DOMINANT HAND	MANE COLOR	WEAKNESS
Piper Pearl	Wave Dash	Star Float	Left Handed	Purple Mane	Bright Flash
River Shine	Tail Whip	Water Whirl	Left Handed	Pink Mane	Sweet Kelp
Cleo Current	Tail Whip	Glow Aura	Left Handed	Purple Mane	Sweet Kelp
Splash Mane	Bubble Shield	Prism Beam	Left Handed	Purple Mane	Bright Flash
Luna Coral	Horn Shine	Star Float	Right Handed	Purple Mane	Sweet Kelp
Coral Sparkle	Wave Dash	Star Float	Left Handed	Blue Mane	Loud Bells
Sapphire Bay	Bubble Shield	Sonic Song	Right Handed	Purple Mane	Bright Flash
Nova Shimmer	Tail Whip	Star Float	Left Handed	Purple Mane	Loud Bells
Skye Lagoon	Tail Whip	Water Whirl	Left Handed	Purple Mane	Bright Flash
Ocean Star	Glitter Blast	Sonic Song	Right Handed	Blue Mane	Bright Flash
Ruby Fin	Horn Shine	Prism Beam	Left Handed	Blue Mane	Sweet Kelp
Marina Shell	Horn Shine	Star Float	Right Handed	Purple Mane	Bright Flash
Pearl Drift	Glitter Blast	Glow Aura	Right Handed	Blue Mane	Loud Bells
Gemma Reef	Tail Whip	Glow Aura	Left Handed	Blue Mane	Sweet Kelp
Cascade Breeze	Horn Shine	Prism Beam	Right Handed	Purple Mane	Loud Bells
Hazel Harbor	Bubble Shield	Glow Aura	Right Handed	Blue Mane	Bright Flash
Misty Horn	Wave Dash	Star Float	Left Handed	Blue Mane	Bright Flash
Sunny Tail	Tail Whip	Glow Aura	Left Handed	Purple Mane	Bright Flash
Aqua Glow	Glitter Blast	Water Whirl	Left Handed	Pink Mane	Sweet Kelp
Indigo Tide	Horn Shine	Prism Beam	Left Handed	Purple Mane	Loud Bells
Violet Stream	Wave Dash	Glow Aura	Left Handed	Purple Mane	Bright Flash

CLUE 1 Addition

To start the search Detective Splash counts all the shiny pearls found near the stolen vault

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

T									T							T			
2	17	16	12	3	4	7	9	2	7	20	16	11	4	20	2	14	11	16	

		T							
18	3	2	16	10	18	17	9	10	5

$1 + 1 = \square \rightarrow$ T	$1 + 3 = \square \rightarrow$ N	$7 + 2 = \square \rightarrow$ I	$1 + 2 = \square \rightarrow$ A
$3 + 4 = \square \rightarrow$ D	$9 + 7 = \square \rightarrow$ E	$7 + 11 = \square \rightarrow$ W	$3 + 2 = \square \rightarrow$ L
$12 + 5 = \square \rightarrow$ H	$7 + 3 = \square \rightarrow$ R	$8 + 3 = \square \rightarrow$ S	$3 + 9 = \square \rightarrow$ B
$8 + 12 = \square \rightarrow$ O	$7 + 7 = \square \rightarrow$ U		

Scratch space:

CLUE 2

Subtraction

Some starfish floated away from the reef so Detective Splash calculates how many remain

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

A									A		A		A				
13	18	12	15	4	6	17	17	17	13	18	13	19	13	4	10	2	4

							A			
15	14	6	16	6	9	15	14	13	4	10

$16 - 3 = \square \rightarrow \boxed{\text{A}}$

$4 - 2 = \square \rightarrow \boxed{\text{O}}$

$14 - 2 = \square \rightarrow \boxed{\text{I}}$

$20 - 2 = \square \rightarrow \boxed{\text{W}}$

$17 - 2 = \square \rightarrow \boxed{\text{T}}$

$8 - 2 = \square \rightarrow \boxed{\text{E}}$

$17 - 3 = \square \rightarrow \boxed{\text{H}}$

$20 - 3 = \square \rightarrow \boxed{\text{S}}$

$11 - 7 = \square \rightarrow \boxed{\text{N}}$

$17 - 7 = \square \rightarrow \boxed{\text{D}}$

$17 - 1 = \square \rightarrow \boxed{\text{L}}$

$20 - 1 = \square \rightarrow \boxed{\text{B}}$

$18 - 9 = \square \rightarrow \boxed{\text{F}}$

Scratch space:

CLUE 3 Skip counting

Detective Splash counts glowing sea crystals along the path by skipping in equal groups

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

T																			
33	21	140	6	30	70	70	80	30	90	20	80	35	35	33	100	50	50	140	25
15	45	80	15	12	30	8	21	33	28	70	80	35	21						

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 → **F**

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

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

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

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

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

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 → **S**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 → **D**

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

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

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

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

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

Scratch space:

CLUE 4
Place value

The magical lock code shows digits for tens and ones on the coral gate screen

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

P			P													
19	24	29	19	22	21	27	57	32	21	28	57	42	29	50	57	11
22	21	61	78	87	32	78	28	21	29	21	21	61				

What number has 1 ten and 9 ones?

→

P

What number has 8 tens and 7 ones?

→

O

What number has 5 tens and 7 ones?

→

A

What number has 2 tens and 7 ones?

→

M

What number has 2 tens and 1 one?

→

E

What number has 4 tens and 2 ones?

→

I

What number has 2 tens and 2 ones?

→

L

What number has 7 tens and 8 ones?

→

T

What number has 5 tens and 0 ones?

→

W

What number has 1 ten and 1 one?

→

S

What number has 3 tens and 2 ones?

→

N

What number has 2 tens and 9 ones?

→

R

What number has 2 tens and 4 ones?

→

U

What number has 2 tens and 8 ones?

→

H

What number has 6 tens and 1 one?

→

F

Scratch space:

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

Detective Splash knows how many shells are needed to fix the bridge and finds what is missing

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:

$1 + \underline{\quad} = 3$

$2 + \underline{\quad} = 8$

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

$8 + \underline{\quad} = 17$

$8 + \underline{\quad} = 18$

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

$2 + \underline{\quad} = 14$

$9 + \underline{\quad} = 13$

$8 + \underline{\quad} = 11$

$3 + \underline{\quad} = 10$

$5 + \underline{\quad} = 13$

Step 2 - cross out the sentence with each answer:

1. The villain swung a tail whip, then shone a glow aura.
2. The villain used a wave dash, then used a star float.
3. The villain lit a horn shine, then shone a glow aura.
4. The villain swung a tail whip, then cast a prism beam.
5. The villain swung a tail whip, then used a star float.
6. The villain used a wave dash, then shone a glow aura.
7. The villain used a wave dash, then made a water whirl.
8. The villain used a wave dash, then sang a sonic song.
9. The villain shot a glitter blast, then used a star float.
10. The villain shot a glitter blast, then cast a prism beam.
11. The villain raised a bubble shield, then cast a prism beam.
12. The villain raised a bubble shield, then shone a glow aura.

Answer Key

The Case of the Missing Star Crystal

Culprit: Splash Mane

Bubble Shield · Prism Beam · Left Handed · Purple Mane · Bright Flash

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE BANDIT DOES NOT USE WATER WHIRL"

$1 + 1 = 2$ (T) · $1 + 3 = 4$ (N) · $7 + 2 = 9$ (I) · $1 + 2 = 3$ (A) · $3 + 4 = 7$ (D) · $9 + 7 = 16$ (E) · $7 + 11 = 18$ (W) · $3 + 2 = 5$ (L) · $12 + 5 = 17$ (H) · $7 + 3 = 10$ (R) · $8 + 3 = 11$ (S) · $3 + 9 = 12$ (B) · $8 + 12 = 20$ (O) · $7 + 7 = 14$ (U)

Clue 2 (Subtraction): "A WITNESS SAW A BAND ON THE LEFT HAND"

$16 - 3 = 13$ (A) · $4 - 2 = 2$ (O) · $14 - 2 = 12$ (I) · $20 - 2 = 18$ (W) · $17 - 2 = 15$ (T) · $8 - 2 = 6$ (E) · $17 - 3 = 14$ (H) · $20 - 3 = 17$ (S) · $11 - 7 = 4$ (N) · $17 - 7 = 10$ (D) · $17 - 1 = 16$ (L) · $20 - 1 = 19$ (B) · $18 - 9 = 9$ (F)

Clue 3 (Skip counting): "THE VILLAIN WAS STOPPED BY A BRIGHT FLASH"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (T) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 = 6 (V) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (F) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 = 50 (P) · Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 = 30 (I) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (A) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 = 70 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (N) · Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 = 15 (B) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (S) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (D) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, __, 15, 18 = 12 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (G) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (Y) · Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 = 20 (W)

Clue 4 (Place value): "PURPLE MANE HAIR WAS LEFT ON THE REEF"

What number has 1 ten and 9 ones? = 19 (P) · What number has 8 tens and 7 ones? = 87 (O) · What number has 5 tens and 7 ones? = 57 (A) · What number has 2 tens and 7 ones? = 27 (M) · What number has 2 tens and 1 one? = 21 (E) · What number has 4 tens and 2 ones? = 42 (I) · What number has 2 tens and 2 ones? = 22 (L) · What number has 7 tens and 8 ones? = 78 (T) · What number has 5 tens and 0 ones? = 50 (W) · What number has 1 ten and 1 one? = 11 (S) · What number has 3 tens and 2 ones? = 32 (N) · What number has 2 tens and 9 ones? = 29 (R) · What number has 2 tens and 4 ones? = 24 (U) · What number has 2 tens and 8 ones? = 28 (H) · What number has 6 tens and 1 one? = 61 (F)

Clue 5 (Missing addends): surviving statement is box 11 → Splash Mane

$1 + \underline{\quad} = 3 = 2$ · $2 + \underline{\quad} = 8 = 6$ · $2 + \underline{\quad} = 3 = 1$ · $8 + \underline{\quad} = 17 = 9$ · $8 + \underline{\quad} = 18 = 10$ · $2 + \underline{\quad} = 7 = 5$ · $2 + \underline{\quad} = 14 = 12$ · $9 + \underline{\quad} = 13 = 4$ · $8 + \underline{\quad} = 11 = 3$ · $3 + \underline{\quad} = 10 = 7$ · $5 + \underline{\quad} = 13 = 8$