



The Case of the Missing Star Crystal

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

Detective: _____ Date: _____

Someone snatched the shiny star crystal from Coral Cat Lagoon. Detective, check the clues to find the sneaky 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 Crystal Thief is _____

Possible suspects

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

NAME	MAGIC SPELL	UNICORN GEM	PAW STYLE	FUR COLOR	WEAKNESS
Sunny Tail	Bubble Shield	Sun Ruby	Left Paw	Pink Fur	Bright Lights
Magic Mittens	Star Glow	Sea Pearl	Right Paw	Blue Fur	Cold Water
Ocean Meow	Bubble Shield	Cloud Diamond	Left Paw	Blue Fur	Loud Bells
Sandy Claws	Star Glow	Moon Sapphire	Left Paw	Blue Fur	Cold Water
Splashy Fuzz	Splash Wave	Sun Ruby	Left Paw	Pink Fur	Bright Lights
Velvet Fins	Rainbow Beam	Star Emerald	Right Paw	Blue Fur	Cold Water
Marina Kitten	Rainbow Beam	Star Emerald	Left Paw	Pink Fur	Loud Bells
Bubbles Tail	Star Glow	Cloud Diamond	Left Paw	Blue Fur	Cold Water
Coral Paws	Rainbow Beam	Star Emerald	Right Paw	Purple Fur	Cold Water
Misty Paw	Sparkle Whistle	Star Emerald	Right Paw	Purple Fur	Loud Bells
Star Tail	Sparkle Whistle	Sea Pearl	Left Paw	Pink Fur	Cold Water
Salty Whiskers	Bubble Shield	Cloud Diamond	Left Paw	Blue Fur	Cold Water
Glimmer Paws	Rainbow Beam	Sun Ruby	Right Paw	Pink Fur	Loud Bells
Dolphin Meow	Splash Wave	Sun Ruby	Left Paw	Blue Fur	Loud Bells
Twinkle Horn	Star Glow	Sea Pearl	Left Paw	Blue Fur	Bright Lights
Captain Purr	Rainbow Beam	Star Emerald	Left Paw	Blue Fur	Cold Water
Wavy Whiskers	Sparkle Whistle	Moon Sapphire	Right Paw	Blue Fur	Bright Lights
Ziggy Seacat	Sparkle Whistle	Sun Ruby	Left Paw	Blue Fur	Cold Water
Sparkle Horn	Star Glow	Sea Pearl	Left Paw	Blue Fur	Loud Bells
Finny Cat	Star Glow	Moon Sapphire	Left Paw	Purple Fur	Bright Lights
Cleo Shell	Rainbow Beam	Star Emerald	Right Paw	Pink Fur	Loud Bells

CLUE 1 Addition

We count all the seashells found near the underwater cave to get our first clue.

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

T																T
3	10	9	5	13	11	11	4	13	20	19	12	9	2	20	12	3

					T											
16	2	9	4	2	3	4	8	9	14	9	8	4	11	19		

$1 + 2 = \square \rightarrow$ T	$6 + 8 = \square \rightarrow$ M	$7 + 6 = \square \rightarrow$ I	$4 + 1 = \square \rightarrow$ V
$5 + 11 = \square \rightarrow$ U	$1 + 1 = \square \rightarrow$ S	$6 + 2 = \square \rightarrow$ R	$3 + 9 = \square \rightarrow$ O
$10 + 9 = \square \rightarrow$ D	$7 + 13 = \square \rightarrow$ N	$5 + 5 = \square \rightarrow$ H	
$5 + 6 = \square \rightarrow$ L	$3 + 1 = \square \rightarrow$ A	$6 + 3 = \square \rightarrow$ E	

Scratch space:

CLUE 2

Subtraction

Some fish swam away from the net leaving only a few left to count.

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

W									W						
1	15	9	12	16	6	6	6	4	1	4	9	18	15	16	7

												W		
8	6	15	12	14	9	18	16	5	16	7	9	2	4	1

$8 - 7 =$

→ W

$7 - 5 =$

→ P

$13 - 4 =$

→ T

$16 - 9 =$

→ F

$18 - 2 =$

→ E

$17 - 2 =$

→ I

$10 - 6 =$

→ A

$17 - 3 =$

→ G

$19 - 7 =$

→ N

$11 - 5 =$

→ S

$20 - 2 =$

→ H

$8 - 3 =$

→ L

$9 - 1 =$

→ U

Scratch space:

CLUE 3 Skip counting

We count the shiny pearl beads by twos along the coral reef.

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

T																
42	25	36	39	40	65	65	10	40	18	24	10	18	10	22	10	120
26	24	45	14	33	45	65	50	22	10	42	36	24				

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 → **D**

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 → **Y**

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

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

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 → **V**

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 → **L**

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

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

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

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

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

Scratch space:

CLUE 4 Place value

The treasure map lists tens and ones to show the secret room code.

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

F																		F		
93	47	23	22	19	24	99	85	22	81	58	11	86	58	23	11	93	23	43		

24	69	69	74	11	99	83	11	22	11

What number has 9 tens and 3 ones? → **F**

What number has 2 tens and 2 ones? → **N**

What number has 9 tens and 9 ones? → **S**

What number has 2 tens and 4 ones? → **A**

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

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

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

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

What number has 1 ten and 9 ones? → **D**

What number has 8 tens and 1 one? → **G**

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

What number has 8 tens and 5 ones? → **I**

What number has 5 tens and 8 ones? → **L**

What number has 2 tens and 3 ones? → **U**

What number has 8 tens and 6 ones? → **B**

What number has 6 tens and 9 ones? → **T**

Scratch space:

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

We need to find how many more magic gems fill the empty chest.

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:

$2 + \underline{\quad} = 13$

$7 + \underline{\quad} = 11$

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

$5 + \underline{\quad} = 6$

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

$10 + \underline{\quad} = 19$

$10 + \underline{\quad} = 20$

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

$7 + \underline{\quad} = 9$

$9 + \underline{\quad} = 16$

$4 + \underline{\quad} = 16$

Step 2 - cross out the sentence with each answer:

1. The villain casts a bubble shield, then shows a sea pearl.
2. The villain plays a sparkle whistle, then activates a star emerald.
3. The villain makes a splash wave, then activates a star emerald.
4. The villain casts a bubble shield, then wears a cloud diamond.
5. The villain creates a star glow, then wears a cloud diamond.
6. The villain makes a splash wave, then shows a sea pearl.
7. The villain plays a sparkle whistle, then wears a cloud diamond.
8. The villain plays a sparkle whistle, then shines a sun ruby.
9. The villain plays a sparkle whistle, then shows a sea pearl.
10. The villain plays a sparkle whistle, then holds a moon sapphire.
11. The villain creates a star glow, then holds a moon sapphire.
12. The villain creates a star glow, then shows a sea pearl.

Answer Key

The Case of the Missing Star Crystal

Culprit: Ziggy Seacat

Sparkle Whistle · Sun Ruby · Left Paw · Blue Fur · Cold Water

Trail: Start 21 → Clue 1 15 → Clue 2 12 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT USE A STAR EMERALD"

$1 + 2 = 3$ (T) · $6 + 8 = 14$ (M) · $7 + 6 = 13$ (I) · $4 + 1 = 5$ (V) · $5 + 11 = 16$ (U) · $1 + 1 = 2$ (S) · $6 + 2 = 8$ (R) · $3 + 9 = 12$ (O) · $10 + 9 = 19$ (D) · $7 + 13 = 20$ (N) · $5 + 5 = 10$ (H) · $5 + 6 = 11$ (L) · $3 + 1 = 4$ (A) · $6 + 3 = 9$ (E)

Clue 2 (Subtraction): "WITNESS SAW A THIEF USING THE LEFT PAW"

$8 - 7 = 1$ (W) · $7 - 5 = 2$ (P) · $13 - 4 = 9$ (T) · $16 - 9 = 7$ (F) · $18 - 2 = 16$ (E) · $17 - 2 = 15$ (I) · $10 - 6 = 4$ (A) · $17 - 3 = 14$ (G) · $19 - 7 = 12$ (N) · $11 - 5 = 6$ (S) · $20 - 2 = 18$ (H) · $8 - 3 = 5$ (L) · $9 - 1 = 8$ (U)

Clue 3 (Skip counting): "THE VILLAIN RAN AWAY FROM COLD WATER"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (T) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, __, 55, 60 = 50 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (F) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (Y) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 = 24 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (E) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (M) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (L) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (H) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (O) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 = 40 (I) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, __, 21, 24 = 18 (N)

Clue 4 (Place value): "FOUND A SINGLE BLUE FUR AT THE SCENE"

What number has 9 tens and 3 ones? = 93 (F) · What number has 2 tens and 2 ones? = 22 (N) · What number has 9 tens and 9 ones? = 99 (S) · What number has 2 tens and 4 ones? = 24 (A) · What number has 7 tens and 4 ones? = 74 (H) · What number has 1 ten and 1 one? = 11 (E) · What number has 4 tens and 7 ones? = 47 (O) · What number has 4 tens and 3 ones? = 43 (R) · What number has 1 ten and 9 ones? = 19 (D) · What number has 8 tens and 1 one? = 81 (G) · What number has 8 tens and 3 ones? = 83 (C) · What number has 8 tens and 5 ones? = 85 (I) · What number has 5 tens and 8 ones? = 58 (L) · What number has 2 tens and 3 ones? = 23 (U) · What number has 8 tens and 6 ones? = 86 (B) · What number has 6 tens and 9 ones? = 69 (T)

Clue 5 (Missing addends): surviving statement is box 8 → Ziggy Seacat

$2 + \underline{\quad} = 13 = 11$ · $7 + \underline{\quad} = 11 = 4$ · $2 + \underline{\quad} = 7 = 5$ · $5 + \underline{\quad} = 6 = 1$ · $2 + \underline{\quad} = 8 = 6$ · $10 + \underline{\quad} = 19 = 9$ · $10 + \underline{\quad} = 20 = 10$ · $8 + \underline{\quad} = 11 = 3$ · $7 + \underline{\quad} = 9 = 2$ · $9 + \underline{\quad} = 16 = 7$ · $4 + \underline{\quad} = 16 = 12$