



The Mystery of the Glitter Pearl

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

Detective: _____ **Date:** _____

A sneaky bubble thief took the giant Glitter Pearl from the Coral Castle. Mermaids and sea-unicorns need your help. Follow the clues to find 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 bubble 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 POWER	SPECIAL SKILL	WRITING HAND	HAIR COLOR	BEST STOP WEAPON
Ariel	bubble shield	pearl blast	left handed	blue hair	shiny mirror
Shelly	rainbow dash	tide swim	right handed	blue hair	tickle feather
Melody	star spark	kelp wrap	left handed	pink hair	tickle feather
Coral	star spark	pearl blast	right handed	blue hair	silly joke
Sandy	coral glow	tide swim	right handed	purple hair	tickle feather
Misty	rainbow dash	tide swim	left handed	blue hair	silly joke
Cleo	rainbow dash	glow horn	right handed	blue hair	shiny mirror
Aqua	coral glow	sea shell song	right handed	blue hair	shiny mirror
Marina	star spark	kelp wrap	right handed	blue hair	silly joke
Glimmer	coral glow	kelp wrap	left handed	purple hair	silly joke
Splash	rainbow dash	kelp wrap	right handed	blue hair	silly joke
Luna	coral glow	sea shell song	right handed	blue hair	silly joke
Shimmer	coral glow	tide swim	right handed	blue hair	tickle feather
Bubbles	wave splash	kelp wrap	right handed	pink hair	shiny mirror
Wave	coral glow	glow horn	right handed	blue hair	silly joke
Sparkle	wave splash	kelp wrap	right handed	pink hair	tickle feather
Sunny	wave splash	sea shell song	right handed	blue hair	silly joke
Pearl	coral glow	tide swim	right handed	purple hair	silly joke
Sirena	wave splash	tide swim	right handed	purple hair	shiny mirror
Star	coral glow	pearl blast	right handed	pink hair	silly joke
Sky	rainbow dash	sea shell song	right handed	pink hair	silly joke

CLUE 1
Place value

A secret code is locked on a sea chest. The lock uses blocks of tens and ones to show the code.

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

T			T										T					
35	57	85	35	57	82	85	45	49	64	40	40	44	35	27	82	40	20	64
27	85	64	27	57	85	69	69	27	44	40	20							

What number has 3 tens and 5 ones?

→ **T**

What number has 5 tens and 7 ones?

→ **H**

What number has 8 tens and 2 ones?

→ **I**

What number has 4 tens and 9 ones?

→ **C**

What number has 4 tens and 5 ones?

→ **F**

What number has 4 tens and 4 ones?

→ **O**

What number has 4 tens and 0 ones?

→ **N**

What number has 2 tens and 0 ones?

→ **G**

What number has 8 tens and 5 ones?

→ **E**

What number has 2 tens and 7 ones?

→ **S**

What number has 6 tens and 4 ones?

→ **A**

What number has 6 tens and 9 ones?

→ **L**

Scratch space:

CLUE 2 Addition

We need to count the starfish. Let us add the red group and the blue group together to get the total.

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

T										T									T		
86	55	46	87	94	46	82	28	65	86	55	33	46	22	81	57	33	86	46	87		
		T		T									T								
81	33	86	55	86	55	46	33	57	57	33	23	55	86	55	82	94	73				

$39 + 47 = \square \rightarrow \boxed{\text{T}}$	$41 + 53 = \square \rightarrow \boxed{\text{N}}$	$22 + 11 = \square \rightarrow \boxed{\text{I}}$
$53 + 34 = \square \rightarrow \boxed{\text{S}}$	$18 + 10 = \square \rightarrow \boxed{\text{K}}$	$19 + 46 = \square \rightarrow \boxed{\text{Y}}$
$12 + 10 = \square \rightarrow \boxed{\text{F}}$	$33 + 40 = \square \rightarrow \boxed{\text{D}}$	$57 + 24 = \square \rightarrow \boxed{\text{W}}$
$21 + 36 = \square \rightarrow \boxed{\text{R}}$	$35 + 20 = \square \rightarrow \boxed{\text{H}}$	$32 + 50 = \square \rightarrow \boxed{\text{A}}$
$16 + 7 = \square \rightarrow \boxed{\text{G}}$	$18 + 28 = \square \rightarrow \boxed{\text{E}}$	

Scratch space:

CLUE 3

Subtraction

Some sea shells floated away in the tide. We must subtract the lost shells from our pile to see what is left.

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

A																	
26	82	74	83	83	15	28	34	72	64	46	74	83	83	82	71	34	62

71	14	64	71	14	74

$28 - 2 = \square \rightarrow \boxed{\text{A}}$

$108 - 34 = \square \rightarrow \boxed{\text{I}}$

$100 - 38 = \square \rightarrow \boxed{\text{P}}$

$53 - 39 = \square \rightarrow \boxed{\text{H}}$

$60 - 26 = \square \rightarrow \boxed{\text{O}}$

$84 - 20 = \square \rightarrow \boxed{\text{E}}$

$92 - 20 = \square \rightarrow \boxed{\text{K}}$

$119 - 37 = \square \rightarrow \boxed{\text{S}}$

$83 - 12 = \square \rightarrow \boxed{\text{T}}$

$78 - 12 = \square \rightarrow \boxed{\text{F}}$

$49 - 34 = \square \rightarrow \boxed{\text{Y}}$

$99 - 16 = \square \rightarrow \boxed{\text{L}}$

$65 - 37 = \square \rightarrow \boxed{\text{J}}$

$65 - 19 = \square \rightarrow \boxed{\text{W}}$

Scratch space:

CLUE 4 Skip counting

Sea horses swim in neat rows of five. We can count them fast if we count by fives to reach the end.

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

W															
70	33	16	26	24	110	27	130	8	24	33	40	35	36	15	35 100
100	40	33	80	35	90	100	8	33							

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 → **W**

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

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

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **B**

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

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

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, __, 26, 28 → **U**

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

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

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

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

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

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

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

Scratch space:

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

We need ten pink pearls for the magic wand. We only have six pearls. How many more do we need to find?

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:

$7 + \underline{\quad} = 18$

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

$5 + \underline{\quad} = 15$

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

$2 + \underline{\quad} = 6$

$3 + \underline{\quad} = 9$

$3 + \underline{\quad} = 6$

$5 + \underline{\quad} = 7$

$8 + \underline{\quad} = 15$

$4 + \underline{\quad} = 13$

$7 + \underline{\quad} = 8$

Step 2 - cross out the sentence with each answer:

1. The villain floats in a giant bubble, then giggles with the sea turtles.
2. The villain gallops on a rainbow trail, then hides behind a kelp forest.
3. The villain swims through the coral, then drops a trail of glitter.
4. The villain gallops on a rainbow trail, then giggles with the sea turtles.
5. The villain swims through the coral, then giggles with the sea turtles.
6. The villain gallops on a rainbow trail, then loses a shiny scale.
7. The villain leaps over the sea wall, then tucks the pearl into a shell.
8. The villain gallops on a rainbow trail, then tucks the pearl into a shell.
9. The villain floats in a giant bubble, then drops a trail of glitter.
10. The villain leaps over the sea wall, then hides behind a kelp forest.
11. The villain splashes in the warm tide, then drops a trail of glitter.
12. The villain splashes in the warm tide, then tucks the pearl into a shell.

Answer Key

The Mystery of the Glitter Pearl

Culprit: Splash

rainbow dash · kelp wrap · right handed · blue hair · silly joke

Trail: Start 21 → Clue 1 17 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE THIEF CANNOT SING A SEA SHELL SONG"

What number has 3 tens and 5 ones? = 35 (T) · What number has 5 tens and 7 ones? = 57 (H) · What number has 8 tens and 2 ones? = 82 (I) · What number has 4 tens and 9 ones? = 49 (C) · What number has 4 tens and 5 ones? = 45 (F) · What number has 4 tens and 4 ones? = 44 (O) · What number has 4 tens and 0 ones? = 40 (N) · What number has 2 tens and 0 ones? = 20 (G) · What number has 8 tens and 5 ones? = 85 (E) · What number has 2 tens and 7 ones? = 27 (S) · What number has 6 tens and 4 ones? = 64 (A) · What number has 6 tens and 9 ones? = 69 (L)

Clue 2 (Addition): "THE SNEAKY THIEF WRITES WITH THEIR RIGHT HAND"

$39 + 47 = 86$ (T) · $41 + 53 = 94$ (N) · $22 + 11 = 33$ (I) · $53 + 34 = 87$ (S) · $18 + 10 = 28$ (K) · $19 + 46 = 65$ (Y) · $12 + 10 = 22$ (F) · $33 + 40 = 73$ (D) · $57 + 24 = 81$ (W) · $21 + 36 = 57$ (R) · $35 + 20 = 55$ (H) · $32 + 50 = 82$ (A) · $16 + 7 = 23$ (G) · $18 + 28 = 46$ (E)

Clue 3 (Subtraction): "A SILLY JOKE WILL STOP THE THIEF"

$28 - 2 = 26$ (A) · $108 - 34 = 74$ (I) · $100 - 38 = 62$ (P) · $53 - 39 = 14$ (H) · $60 - 26 = 34$ (O) · $84 - 20 = 64$ (E) · $92 - 20 = 72$ (K) · $119 - 37 = 82$ (S) · $83 - 12 = 71$ (T) · $78 - 12 = 66$ (F) · $49 - 34 = 15$ (Y) · $99 - 16 = 83$ (L) · $65 - 37 = 28$ (J) · $65 - 19 = 46$ (W)

Clue 4 (Skip counting): "WE FOUND BLUE HAIR AT THE CASTLE"

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (W) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (N) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 = 40 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (B) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, __, 18, 21 = 15 (R) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, __, 26, 28 = 24 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (T) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 = 16 (F) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (I) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (C) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (L) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (E)

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

$7 + \underline{\quad} = 18 = 11$ · $6 + \underline{\quad} = 18 = 12$ · $5 + \underline{\quad} = 15 = 10$ · $2 + \underline{\quad} = 7 = 5$ · $2 + \underline{\quad} = 6 = 4$ · $3 + \underline{\quad} = 9 = 6$ · $3 + \underline{\quad} = 6 = 3$ · $5 + \underline{\quad} = 7 = 2$ · $8 + \underline{\quad} = 15 = 7$ · $4 + \underline{\quad} = 13 = 9$ · $7 + \underline{\quad} = 8 = 1$