



The Mystery of the Pink Pearl

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

Detective: _____ Date: _____

Oh no! The shiny Pink Pearl is gone from Coral Cove Castle. A rogue mermaid took it. We must find them!

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 rogue mermaid is _____

Possible suspects

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

NAME	BUBBLE MAGIC	OCEAN GEAR	SWIMMING STYLE	SEAWEED CROWN	SECRET FEAR
Storm	kelp tangling	gold crown	right handed fin	red sea-ribbon	tickly sea feather
Shelly	kelp tangling	sea shell map	right handed fin	green kelp	loud whale song
Nerida	tide twisting	gold crown	right handed fin	red sea-ribbon	tickly sea feather
River	kelp tangling	gold crown	right handed fin	blue sea-grass	loud whale song
Sandy	wave jumping	sea shell map	right handed fin	blue sea-grass	loud whale song
Cleo	kelp tangling	pearl ring	left handed fin	blue sea-grass	bright flashlight
Brooke	wave jumping	coral wand	left handed fin	red sea-ribbon	bright flashlight
Marina	kelp tangling	coral wand	left handed fin	red sea-ribbon	tickly sea feather
Ocean	wave jumping	pearl ring	right handed fin	red sea-ribbon	tickly sea feather
Kai	tide twisting	sea shell map	right handed fin	red sea-ribbon	tickly sea feather
Splash	shell singing	sea shell map	left handed fin	blue sea-grass	loud whale song
Ariel	star shining	pearl ring	right handed fin	red sea-ribbon	tickly sea feather
Pearl	kelp tangling	coral wand	right handed fin	red sea-ribbon	bright flashlight
Finn	shell singing	sea shell map	left handed fin	blue sea-grass	tickly sea feather
Ray	kelp tangling	coral wand	left handed fin	blue sea-grass	loud whale song
Coral	wave jumping	pink cape	right handed fin	red sea-ribbon	bright flashlight
Tallulah	star shining	pearl ring	right handed fin	red sea-ribbon	bright flashlight
Wade	wave jumping	pearl ring	right handed fin	blue sea-grass	tickly sea feather
Caspian	shell singing	sea shell map	left handed fin	green kelp	tickly sea feather
Waverly	tide twisting	coral wand	left handed fin	red sea-ribbon	loud whale song
Nixie	tide twisting	pink cape	right handed fin	green kelp	loud whale song

CLUE 1

Addition

We count the starfish on the sea wall. Some are red and some are blue. Let us add them all up to find the total.

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

T																	T
18	15	7	12	16	2	2	20	16	4	13	5	7	10	4	5	18	

15	20	12	7	20	10	7	20	10	15	7	2	2	9	20	17		

$9 + 9 = \square \rightarrow \boxed{\text{T}}$

$6 + 9 = \square \rightarrow \boxed{\text{H}}$

$1 + 3 = \square \rightarrow \boxed{\text{N}}$

$1 + 1 = \square \rightarrow \boxed{\text{L}}$

$3 + 2 = \square \rightarrow \boxed{\text{O}}$

$11 + 6 = \square \rightarrow \boxed{\text{P}}$

$7 + 5 = \square \rightarrow \boxed{\text{V}}$

$4 + 6 = \square \rightarrow \boxed{\text{S}}$

$11 + 9 = \square \rightarrow \boxed{\text{A}}$

$12 + 4 = \square \rightarrow \boxed{\text{I}}$

$3 + 4 = \square \rightarrow \boxed{\text{E}}$

$2 + 7 = \square \rightarrow \boxed{\text{M}}$

$3 + 10 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 2

Subtraction

A hungry crab ate some of our sweet kelp snacks. Let us subtract the eaten snacks to see what is left.

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

T								T		T							T
2	10	18	3	7	14	1	15	2	13	2	10	18	17	12	9	10	2

T							
2	13	18	7	16	1	4	18

$7 - 5 = \square \rightarrow$ T	$19 - 1 = \square \rightarrow$ E	$11 - 1 = \square \rightarrow$ H	$11 - 7 = \square \rightarrow$ P
$19 - 3 = \square \rightarrow$ C	$16 - 4 = \square \rightarrow$ I	$18 - 3 = \square \rightarrow$ M	$8 - 1 = \square \rightarrow$ S
$4 - 3 = \square \rightarrow$ A	$10 - 7 = \square \rightarrow$ Y	$15 - 2 = \square \rightarrow$ O	$18 - 1 = \square \rightarrow$ R
$14 - 5 = \square \rightarrow$ G	$17 - 3 = \square \rightarrow$ W		

Scratch space:

CLUE 3 Skip counting

We see schools of tiny fish swimming by twos. Let us count them by twos to see how many fish are in the bay.

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

T																
20	60	120	25	28	60	140	80	120	45	120	6	110	60	120	36	12
			T				T							T		
24	120	12	20	60	120	45	20	42	100	33	60	120	6	20	60	120

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

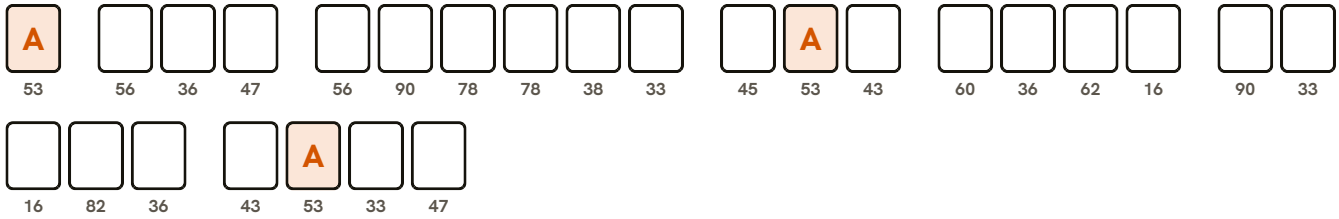
Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 → **F**

Scratch space:

CLUE 4 Place value

The sea shells are packed in boxes of ten and some single shells. We must count the tens and ones to find the number.

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



What number has 5 tens and 3 ones? → **A**

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

What number has 8 tens and 2 ones? → **H**

What number has 5 tens and 6 ones? → **R**

What number has 6 tens and 0 ones? → **L**

What number has 9 tens and 0 ones? → **I**

What number has 3 tens and 6 ones? → **E**

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

What number has 6 tens and 2 ones? → **F**

What number has 7 tens and 8 ones? → **B**

What number has 1 ten and 6 ones? → **T**

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

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

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

Scratch space:

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

We need ten shiny pearls to open the magic chest, but we only have six. Let us find the missing number to open it.

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:

$2 + \underline{\quad} = 4$

$3 + \underline{\quad} = 13$

$6 + \underline{\quad} = 15$

$5 + \underline{\quad} = 17$

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

$6 + \underline{\quad} = 14$

$9 + \underline{\quad} = 10$

$5 + \underline{\quad} = 8$

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

$10 + \underline{\quad} = 14$

$8 + \underline{\quad} = 13$

Step 2 - cross out the sentence with each answer:

1. The villain shines like a bright star, then polishes a heavy gold crown.
2. The villain jumps over the giant waves, then spins a magic pearl ring.
3. The villain sings a sleepy shell song, then puts on a shiny pink cape.
4. The villain twists the strong sea tides, then puts on a shiny pink cape.
5. The villain tangles the path with kelp, then checks a dusty sea shell map.
6. The villain shines like a bright star, then spins a magic pearl ring.
7. The villain sings a sleepy shell song, then checks a dusty sea shell map.
8. The villain twists the strong sea tides, then checks a dusty sea shell map.
9. The villain twists the strong sea tides, then polishes a heavy gold crown.
10. The villain tangles the path with kelp, then polishes a heavy gold crown.
11. The villain jumps over the giant waves, then puts on a shiny pink cape.
12. The villain twists the strong sea tides, then waves a glowing coral wand.

Answer Key

The Mystery of the Pink Pearl

Culprit: Ariel

star shining · pearl ring · right handed fin · red sea-ribbon · tickly sea feather

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT HAVE A SEA SHELL MAP"

$9 + 9 = 18$ (T) · $6 + 9 = 15$ (H) · $1 + 3 = 4$ (N) · $1 + 1 = 2$ (L) · $3 + 2 = 5$ (O) · $11 + 6 = 17$ (P) · $7 + 5 = 12$ (V) · $4 + 6 = 10$ (S) · $11 + 9 = 20$ (A) · $12 + 4 = 16$ (I) · $3 + 4 = 7$ (E) · $2 + 7 = 9$ (M) · $3 + 10 = 13$ (D)

Clue 2 (Subtraction): "THEY SWAM TO THE RIGHT TO ESCAPE"

$7 - 5 = 2$ (T) · $19 - 1 = 18$ (E) · $11 - 1 = 10$ (H) · $11 - 7 = 4$ (P) · $19 - 3 = 16$ (C) · $16 - 4 = 12$ (I) · $18 - 3 = 15$ (M) · $8 - 1 = 7$ (S) · $4 - 3 = 1$ (A) · $10 - 7 = 3$ (Y) · $15 - 2 = 13$ (O) · $18 - 1 = 17$ (R) · $14 - 5 = 9$ (G) · $17 - 3 = 14$ (W)

Clue 3 (Skip counting): "THEY SHIVERED WHEN A FEATHER TOUCHED THEM"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, __, 22, 24 = 20 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, __, 21, 24 = 18 (M) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (E) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (R) · Skip-count by 2s. Fill the blank: 2, 4, __, 8, 10 = 6 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, __, 14, 16 = 12 (A) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (C) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (N) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (W) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (Y) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (I) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (V) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, __, 27, 30 = 24 (F)

Clue 4 (Place value): "A RED RIBBON WAS LEFT IN THE SAND"

What number has 5 tens and 3 ones? = 53 (A) · What number has 3 tens and 3 ones? = 33 (N) · What number has 8 tens and 2 ones? = 82 (H) · What number has 5 tens and 6 ones? = 56 (R) · What number has 6 tens and 0 ones? = 60 (L) · What number has 9 tens and 0 ones? = 90 (I) · What number has 3 tens and 6 ones? = 36 (E) · What number has 4 tens and 7 ones? = 47 (D) · What number has 6 tens and 2 ones? = 62 (F) · What number has 7 tens and 8 ones? = 78 (B) · What number has 1 ten and 6 ones? = 16 (T) · What number has 4 tens and 3 ones? = 43 (S) · What number has 3 tens and 8 ones? = 38 (O) · What number has 4 tens and 5 ones? = 45 (W)

Clue 5 (Missing addends): surviving statement is box 6 → Ariel

$2 + \underline{\quad} = 4 = 2$ · $3 + \underline{\quad} = 13 = 10$ · $6 + \underline{\quad} = 15 = 9$ · $5 + \underline{\quad} = 17 = 12$ · $1 + \underline{\quad} = 12 = 11$ · $6 + \underline{\quad} = 14 = 8$ · $9 + \underline{\quad} = 10 = 1$ · $5 + \underline{\quad} = 8 = 3$ · $9 + \underline{\quad} = 16 = 7$ · $10 + \underline{\quad} = 14 = 4$ · $8 + \underline{\quad} = 13 = 5$