



The Magic Pearl Mystery

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

Detective: _____ Date: _____

Someone took the Magic Pearl from the Royal Reef Castle! The Royal Reef Keeper needs your help to find the sea 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 sea thief is _____

Possible suspects

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

NAME	SWIM POWER	MAGIC TOY	GOGGLE STYLE	TAIL COLOR	FEAR
Marina	whirlpool spin	pearl ring	seaweed goggles	blue tail	loud sounds
Coral	dolphin dash	bubble wand	shell goggles	blue tail	loud sounds
Sirena	tidal wave	bubble wand	seaweed goggles	green tail	bright light
Melody	coral jump	clam drum	seaweed goggles	blue tail	tickles
Pearl	whirlpool spin	clam drum	shell goggles	blue tail	loud sounds
Sandy	dolphin dash	pearl ring	seaweed goggles	blue tail	tickles
Adella	tidal wave	pearl ring	shell goggles	pink tail	bright light
Cleo	whirlpool spin	shell flute	seaweed goggles	blue tail	tickles
Alana	whirlpool spin	star wand	seaweed goggles	green tail	tickles
Arista	kelp swing	clam drum	shell goggles	green tail	bright light
Shelly	dolphin dash	bubble wand	seaweed goggles	green tail	tickles
Andrina	whirlpool spin	clam drum	seaweed goggles	blue tail	tickles
Ocean	whirlpool spin	bubble wand	seaweed goggles	blue tail	tickles
Talia	whirlpool spin	pearl ring	shell goggles	pink tail	tickles
Attina	tidal wave	clam drum	shell goggles	blue tail	tickles
Chelsea	whirlpool spin	star wand	seaweed goggles	green tail	loud sounds
Madison	coral jump	star wand	shell goggles	green tail	bright light
Nixie	coral jump	pearl ring	seaweed goggles	blue tail	tickles
Delphine	whirlpool spin	shell flute	seaweed goggles	blue tail	loud sounds
Ariel	dolphin dash	pearl ring	shell goggles	blue tail	tickles
Nerida	dolphin dash	shell flute	seaweed goggles	pink tail	bright light

CLUE 1 Addition

A friendly sea turtle counts the shiny sea-glass pieces. He adds the green ones and the blue ones to find the total.

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

T			T											T				
79	46	69	79	46	68	69	31	51	78	69	98	32	78	79	60	34	47	57

T										
79	46	69	29	34	47	87	51	22	54	87

$29 + 50 = \square \rightarrow$ T	$18 + 16 = \square \rightarrow$ L	$17 + 40 = \square \rightarrow$ Y
$38 + 30 = \square \rightarrow$ I	$37 + 23 = \square \rightarrow$ P	$10 + 19 = \square \rightarrow$ C
$15 + 36 = \square \rightarrow$ D	$16 + 16 = \square \rightarrow$ N	$50 + 37 = \square \rightarrow$ M
$14 + 17 = \square \rightarrow$ F	$45 + 33 = \square \rightarrow$ O	$49 + 20 = \square \rightarrow$ E
$12 + 10 = \square \rightarrow$ R	$22 + 24 = \square \rightarrow$ H	$18 + 36 = \square \rightarrow$ U
$29 + 69 = \square \rightarrow$ S	$16 + 31 = \square \rightarrow$ A	

Scratch space:

CLUE 2

Subtraction

A school of tiny fish swims away from a hungry crab. We subtract the fish that left to see how many are still safe.

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

T			T																
59	79	75	59	79	50	75	14	34	75	32	80	47	47	75	32	34	75	75	44
73	61	73	73	78	75	47													

$68 - 9 = \square \rightarrow \boxed{\text{T}}$

$107 - 32 = \square \rightarrow \boxed{\text{E}}$

$67 - 23 = \square \rightarrow \boxed{\text{D}}$

$75 - 2 = \square \rightarrow \boxed{\text{G}}$

$68 - 34 = \square \rightarrow \boxed{\text{W}}$

$48 - 16 = \square \rightarrow \boxed{\text{A}}$

$61 - 11 = \square \rightarrow \boxed{\text{I}}$

$89 - 28 = \square \rightarrow \boxed{\text{O}}$

$35 - 21 = \square \rightarrow \boxed{\text{F}}$

$92 - 13 = \square \rightarrow \boxed{\text{H}}$

$84 - 6 = \square \rightarrow \boxed{\text{L}}$

$114 - 34 = \square \rightarrow \boxed{\text{R}}$

$75 - 28 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 3 Skip counting

Two baby dolphins swim in pairs. We count them by twos as they jump over the reef.

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

T			T														
55	36	65	55	36	30	65	16	9	65	40	40	21	30	16	9	14	120
T						T											
55	30	20	27	40	65	55	36	65	6								

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

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

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

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

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

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

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

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

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

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

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

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

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

Scratch space:

CLUE 4
Place value

A crab packs ocean pearls into boxes of ten. We count the boxes and the leftover single pearls.

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

W																
37	87	43	84	63	55	62	88	89	66	18	55	11	97	56	63	87

89	36	88	56	87

What number has 3 tens and 7 ones?

→ **W**

What number has 5 tens and 6 ones?

→ **L**

What number has 3 tens and 6 ones?

→ **C**

What number has 5 tens and 5 ones?

→ **N**

What number has 6 tens and 6 ones?

→ **H**

What number has 6 tens and 2 ones?

→ **D**

What number has 6 tens and 3 ones?

→ **U**

What number has 8 tens and 4 ones?

→ **O**

What number has 8 tens and 8 ones?

→ **A**

What number has 1 ten and 8 ones?

→ **I**

What number has 1 ten and 1 one?

→ **Y**

What number has 4 tens and 3 ones?

→ **F**

What number has 9 tens and 7 ones?

→ **B**

What number has 8 tens and 9 ones?

→ **S**

What number has 8 tens and 7 ones?

→ **E**

Scratch space:

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

We need ten pink shells to open the big stone gate. We have six shells and must find how many more we need.

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:

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

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

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

$1 + \underline{\quad} = 4$

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

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

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

$8 + \underline{\quad} = 14$

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

$3 + \underline{\quad} = 4$

$9 + \underline{\quad} = 21$

Step 2 - cross out the sentence with each answer:

1. The villain spun in a whirlpool spin, then tapped on a loud clam drum.
2. The villain spun in a whirlpool spin, then waved a magic bubble wand.
3. The villain leaped over a coral jump, then waved a magic bubble wand.
4. The villain spun in a whirlpool spin, then played a tune on a shell flute.
5. The villain did a fast dolphin dash, then tapped on a loud clam drum.
6. The villain swung on a long kelp swing, then played a tune on a shell flute.
7. The villain swung on a long kelp swing, then tapped on a loud clam drum.
8. The villain did a fast dolphin dash, then waved a magic bubble wand.
9. The villain leaped over a coral jump, then polished a shiny pearl ring.
10. The villain did a fast dolphin dash, then polished a shiny pearl ring.
11. The villain leaped over a coral jump, then played a tune on a shell flute.
12. The villain did a fast dolphin dash, then shined a bright star wand.

Answer Key

The Magic Pearl Mystery

Culprit: Ocean

whirlpool spin · bubble wand · seaweed goggles · blue tail · tickles

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT PLAY THE CLAM DRUM"

$29 + 50 = 79$ (T) · $18 + 16 = 34$ (L) · $17 + 40 = 57$ (Y) · $38 + 30 = 68$ (I) · $37 + 23 = 60$ (P) · $10 + 19 = 29$ (C) · $15 + 36 = 51$ (D) · $16 + 16 = 32$ (N) · $50 + 37 = 87$ (M) · $14 + 17 = 31$ (F) · $45 + 33 = 78$ (O) · $49 + 20 = 69$ (E) · $12 + 10 = 22$ (R) · $22 + 24 = 46$ (H) · $18 + 36 = 54$ (U) · $29 + 69 = 98$ (S) · $16 + 31 = 47$ (A)

Clue 2 (Subtraction): "THE THIEF WEARS SEAWEED GOGGLES"

$68 - 9 = 59$ (T) · $107 - 32 = 75$ (E) · $67 - 23 = 44$ (D) · $75 - 2 = 73$ (G) · $68 - 34 = 34$ (W) · $48 - 16 = 32$ (A) · $61 - 11 = 50$ (I) · $89 - 28 = 61$ (O) · $35 - 21 = 14$ (F) · $92 - 13 = 79$ (H) · $84 - 6 = 78$ (L) · $114 - 34 = 80$ (R) · $75 - 28 = 47$ (S)

Clue 3 (Skip counting): "THE THIEF YELLS IF YOU TICKLE THEM"

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

Clue 4 (Place value): "WE FOUND A SHINY BLUE SCALE"

What number has 3 tens and 7 ones? = 37 (W) · What number has 5 tens and 6 ones? = 56 (L) · What number has 3 tens and 6 ones? = 36 (C) · What number has 5 tens and 5 ones? = 55 (N) · What number has 6 tens and 6 ones? = 66 (H) · What number has 6 tens and 2 ones? = 62 (D) · What number has 6 tens and 3 ones? = 63 (U) · What number has 8 tens and 4 ones? = 84 (O) · What number has 8 tens and 8 ones? = 88 (A) · What number has 1 ten and 8 ones? = 18 (I) · What number has 1 ten and 1 one? = 11 (Y) · What number has 4 tens and 3 ones? = 43 (F) · What number has 9 tens and 7 ones? = 97 (B) · What number has 8 tens and 9 ones? = 89 (S) · What number has 8 tens and 7 ones? = 87 (E)

Clue 5 (Missing addends): surviving statement is box 2 → Ocean

$4 + \underline{\quad} = 13 = 9$ · $8 + \underline{\quad} = 18 = 10$ · $9 + \underline{\quad} = 13 = 4$ · $1 + \underline{\quad} = 4 = 3$ · $5 + \underline{\quad} = 13 = 8$ · $8 + \underline{\quad} = 13 = 5$ · $7 + \underline{\quad} = 18 = 11$ · $8 + \underline{\quad} = 14 = 6$ · $3 + \underline{\quad} = 10 = 7$ · $3 + \underline{\quad} = 4 = 1$ · $9 + \underline{\quad} = 21 = 12$