



The Great Pearl Heist

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

Detective: _____ Date: _____

Oh no! The Royal Pearl is gone. Someone swam into the Pearl Keeper's cave and took it. We must find the Shadow 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 Shadow Thief is _____

Possible suspects

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

NAME	OCEAN MAGIC	TRINKET	SWIMMING TAIL	HAIR COLOR	SECRET WEAKNESS
Splash	wave dashes	a pearl crown	right fin swimmer	starfish pink	loud whale song
Coral	shell shields	a kelp lasso	left fin swimmer	starfish pink	loud whale song
Triton	glow bubbles	a seashell horn	left fin swimmer	coral orange	loud whale song
Piper	wave dashes	a silver trident	left fin swimmer	coral orange	tickly sand
Mami	coral leaps	a kelp lasso	left fin swimmer	starfish pink	bright light
Gemma	kelp tangles	a pearl crown	left fin swimmer	seaweed green	loud whale song
Nerida	shell shields	a kelp lasso	left fin swimmer	starfish pink	bright light
Ariel	glow bubbles	a seashell horn	right fin swimmer	starfish pink	tickly sand
Kai	wave dashes	a kelp lasso	left fin swimmer	starfish pink	tickly sand
Cleo	wave dashes	a seashell horn	right fin swimmer	seaweed green	loud whale song
Wave	coral leaps	a pearl crown	right fin swimmer	seaweed green	loud whale song
Delphine	glow bubbles	a seashell horn	left fin swimmer	seaweed green	loud whale song
Cora	coral leaps	a seashell horn	left fin swimmer	starfish pink	tickly sand
Shelly	shell shields	a seashell horn	left fin swimmer	seaweed green	bright light
Wade	shell shields	a silver trident	left fin swimmer	seaweed green	loud whale song
Blue	coral leaps	a golden comb	left fin swimmer	starfish pink	bright light
Sunny	coral leaps	a golden comb	right fin swimmer	seaweed green	tickly sand
Pearl	kelp tangles	a silver trident	left fin swimmer	seaweed green	loud whale song
Brooke	glow bubbles	a kelp lasso	left fin swimmer	seaweed green	bright light
Sandy	kelp tangles	a golden comb	left fin swimmer	starfish pink	tickly sand
Marina	glow bubbles	a golden comb	left fin swimmer	seaweed green	loud whale song

CLUE 1 Place value

The Pearl Keeper has a digital seashell that counts pearls. To unlock the first clue, we need to find how many tens and ones are in this pearl pattern.

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

T			T											T				
28	80	42	28	80	63	42	18	78	35	42	55	16	35	28	80	33	11	42
33	13	42	33	96	41	71	96	35	73	16								

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

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

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

What number has 5 tens and 5 ones? → **S**

What number has 1 ten and 8 ones? → **F**

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

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

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

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

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

What number has 7 tens and 3 ones? → **W**

What number has 4 tens and 1 one? → **L**

What number has 1 ten and 3 ones? → **P**

What number has 7 tens and 1 one? → **C**

What number has 8 tens and 0 ones? → **H**

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

Scratch space:

CLUE 2 Addition

We found some starfish near the cave. Let us add the group on the left and the group on the right to get the magic sum.

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

T								T		T						T
90	25	77	50	54	55	31	89	90	69	90	25	77	91	77	84	90
54	61	74	77	69	30	91	50									

$38 + 52 = \square \rightarrow \text{D}$	$35 + 39 = \square \rightarrow \text{D}$	$22 + 9 = \square \rightarrow \text{A}$
$21 + 29 = \square \rightarrow \text{Y}$	$41 + 43 = \square \rightarrow \text{F}$	$17 + 37 = \square \rightarrow \text{S}$
$43 + 18 = \square \rightarrow \text{I}$	$11 + 19 = \square \rightarrow \text{N}$	$17 + 8 = \square \rightarrow \text{H}$
$29 + 62 = \square \rightarrow \text{L}$	$39 + 16 = \square \rightarrow \text{W}$	$27 + 42 = \square \rightarrow \text{O}$
$59 + 30 = \square \rightarrow \text{M}$	$23 + 54 = \square \rightarrow \text{E}$	

Scratch space:

CLUE 3

Subtraction

A school of friendly clownfish wants to help. Some swam away, and we must subtract to see how many are left to guide us.

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

P																			
12	59	45	16	45	59	83	15	55	27	53	45	59	47	14	83	85	19		

					P				
65	83	14	65	83	12	65	53	47	23

$30 - 18 = \square \rightarrow \boxed{\text{P}}$

$89 - 6 = \square \rightarrow \boxed{\text{O}}$

$71 - 18 = \square \rightarrow \boxed{\text{H}}$

$43 - 28 = \square \rightarrow \boxed{\text{U}}$

$101 - 16 = \square \rightarrow \boxed{\text{N}}$

$79 - 34 = \square \rightarrow \boxed{\text{A}}$

$72 - 7 = \square \rightarrow \boxed{\text{T}}$

$34 - 7 = \square \rightarrow \boxed{\text{W}}$

$77 - 22 = \square \rightarrow \boxed{\text{D}}$

$47 - 31 = \square \rightarrow \boxed{\text{Y}}$

$75 - 16 = \square \rightarrow \boxed{\text{L}}$

$48 - 1 = \square \rightarrow \boxed{\text{E}}$

$18 - 4 = \square \rightarrow \boxed{\text{S}}$

$43 - 24 = \square \rightarrow \boxed{\text{G}}$

$42 - 19 = \square \rightarrow \boxed{\text{M}}$

Scratch space:

CLUE 4 Skip counting

To cross the deep trench, we must hop on the glowing coral blocks. Let us count the blocks by fives to reach the next clue safely.

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

T			T															
33	25	42	33	25	21	42	14	90	42	14	33	39	42	20	28	42	42	65
36	22	42	42	24	25	20	21	22										

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, 6, 8, 10, 12, 14, 16, 18, __, 22, 24 → **A**

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

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

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

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

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

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

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

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

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

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

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

→



Scratch space:

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

We have a small treasure chest that holds ten shiny shells. We only have six now, so let us find how many more we need 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:

$2 + \underline{\quad} = 10$

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

$10 + \underline{\quad} = 15$

$1 + \underline{\quad} = 7$

$6 + \underline{\quad} = 13$

$6 + \underline{\quad} = 10$

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

$3 + \underline{\quad} = 15$

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

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

$9 + \underline{\quad} = 20$

Step 2 - cross out the sentence with each answer:

1. The villain uses kelp tangles to block paths, then throws a kelp lasso.
2. The villain shoots glow bubbles to hide, then blows a seashell horn.
3. The villain shoots glow bubbles to hide, then throws a kelp lasso.
4. The villain shoots glow bubbles to hide, then swings a silver trident.
5. The villain raises shell shields to escape, then swings a silver trident.
6. The villain makes huge wave dashes to flee, then drops a golden comb.
7. The villain raises shell shields to escape, then loses a pearl crown.
8. The villain shoots glow bubbles to hide, then drops a golden comb.
9. The villain shoots glow bubbles to hide, then loses a pearl crown.
10. The villain uses kelp tangles to block paths, then swings a silver trident.
11. The villain makes huge wave dashes to flee, then blows a seashell horn.
12. The villain makes huge wave dashes to flee, then swings a silver trident.

Answer Key

The Great Pearl Heist

Culprit: Delphine

glow bubbles · a seashell horn · left fin swimmer · seaweed green · loud whale song

Trail: Start 21 → Clue 1 18 → Clue 2 15 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE THIEF DOES NOT HAVE A PEARL CROWN"

What number has 2 tens and 8 ones? = 28 (T) · What number has 3 tens and 5 ones? = 35 (O) · What number has 7 tens and 8 ones? = 78 (D) · What number has 5 tens and 5 ones? = 55 (S) · What number has 1 ten and 8 ones? = 18 (F) · What number has 1 ten and 1 one? = 11 (V) · What number has 4 tens and 2 ones? = 42 (E) · What number has 9 tens and 6 ones? = 96 (R) · What number has 6 tens and 3 ones? = 63 (I) · What number has 3 tens and 3 ones? = 33 (A) · What number has 7 tens and 3 ones? = 73 (W) · What number has 4 tens and 1 one? = 41 (L) · What number has 1 ten and 3 ones? = 13 (P) · What number has 7 tens and 1 one? = 71 (C) · What number has 8 tens and 0 ones? = 80 (H) · What number has 1 ten and 6 ones? = 16 (N)

Clue 2 (Addition): "THEY SWAM TO THE LEFT SIDE ONLY"

$38 + 52 = 90$ (T) · $35 + 39 = 74$ (D) · $22 + 9 = 31$ (A) · $21 + 29 = 50$ (Y) · $41 + 43 = 84$ (F) · $17 + 37 = 54$ (S) · $43 + 18 = 61$ (I) · $11 + 19 = 30$ (N) · $17 + 8 = 25$ (H) · $29 + 62 = 91$ (L) · $39 + 16 = 55$ (W) · $27 + 42 = 69$ (O) · $59 + 30 = 89$ (M) · $23 + 54 = 77$ (E)

Clue 3 (Subtraction): "PLAY A LOUD WHALE SONG TO STOP THEM"

$30 - 18 = 12$ (P) · $89 - 6 = 83$ (O) · $71 - 18 = 53$ (H) · $43 - 28 = 15$ (U) · $101 - 16 = 85$ (N) · $79 - 34 = 45$ (A) · $72 - 7 = 65$ (T) · $34 - 7 = 27$ (W) · $77 - 22 = 55$ (D) · $47 - 31 = 16$ (Y) · $75 - 16 = 59$ (L) · $48 - 1 = 47$ (E) · $18 - 4 = 14$ (S) · $43 - 24 = 19$ (G) · $42 - 19 = 23$ (M)

Clue 4 (Skip counting): "THE THIEF LEFT SEAWEED GREEN HAIR"

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, 6, 8, 10, 12, 14, 16, 18, __, 22, 24 = 20 (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, __, 26, 28 = 24 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (F) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (L) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (D) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (W)

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

$2 + \underline{\quad} = 10 = 8$ · $10 + \underline{\quad} = 20 = 10$ · $10 + \underline{\quad} = 15 = 5$ · $1 + \underline{\quad} = 7 = 6$ · $6 + \underline{\quad} = 13 = 7$ · $6 + \underline{\quad} = 10 = 4$ · $4 + \underline{\quad} = 13 = 9$ · $3 + \underline{\quad} = 15 = 12$ · $8 + \underline{\quad} = 11 = 3$ · $2 + \underline{\quad} = 3 = 1$ · $9 + \underline{\quad} = 20 = 11$