The Case of the Missing Rainbow Pearl

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

Detective: _____ **Date:** _____

Someone snuck into the underwater castle and snatched the glowing Rainbow Pearl! Help the Purr Guard decode the clues and find the sneaky culprit.

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 Prowler is _____

Possible suspects

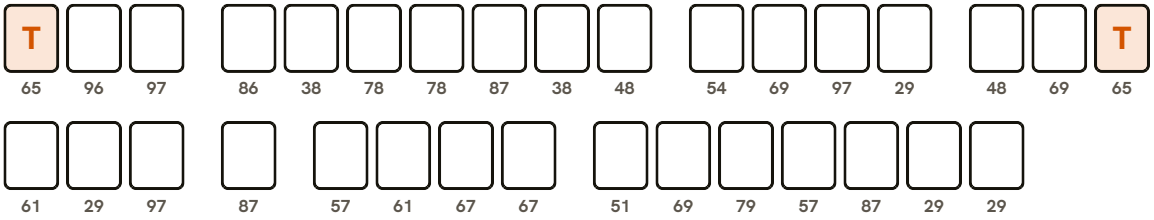
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	MAGIC GEM	PURR GADGET	PAW STYLE	MANE COLOR	SILLY WEAKNESS
Jasper Jewel	Star Gem	Yarn Blaster	Left Paws	Silver Hair	Cold Water
Glimmer Grace	Shell Flute	Glow Collar	Left Paws	Gold Hair	Bright Light
Rainbow Reef	Bubble Staff	Glow Collar	Left Paws	Gold Hair	Bright Light
Bubbles McPurr	Rainbow Orb	Fish Bell	Right Paws	Pink Hair	Loud Music
Splashy Star	Bubble Staff	Glow Collar	Left Paws	Pink Hair	Cold Water
Captain Tabby	Bubble Staff	Glow Collar	Right Paws	Silver Hair	Loud Music
Sparkle Sam	Rainbow Orb	Fish Bell	Left Paws	Pink Hair	Bright Light
Minnie Mermaid	Bubble Staff	Catnip Cloak	Right Paws	Pink Hair	Cold Water
Nautilus Ned	Pearl Wand	Yarn Blaster	Right Paws	Pink Hair	Bright Light
Finley Purr	Shell Flute	Catnip Cloak	Right Paws	Silver Hair	Bright Light
Sandy Paws	Pearl Wand	Purr Compass	Right Paws	Gold Hair	Bright Light
Salty Sam	Shell Flute	Fish Bell	Left Paws	Pink Hair	Cold Water
Felix Float	Pearl Wand	Catnip Cloak	Right Paws	Gold Hair	Cold Water
Barnaby Bubbly	Star Gem	Glow Collar	Left Paws	Pink Hair	Cold Water
Unicorn Tail	Shell Flute	Purr Compass	Left Paws	Pink Hair	Cold Water
Shelly Tail	Bubble Staff	Yarn Blaster	Right Paws	Pink Hair	Bright Light
Coral Calico	Star Gem	Glow Collar	Left Paws	Silver Hair	Cold Water
Pearl Paws	Shell Flute	Purr Compass	Left Paws	Silver Hair	Loud Music
Paws Poseidon	Pearl Wand	Glow Collar	Right Paws	Silver Hair	Loud Music
Tide Tabby	Bubble Staff	Catnip Cloak	Left Paws	Pink Hair	Cold Water
Cleo Catlantis	Pearl Wand	Purr Compass	Left Paws	Pink Hair	Loud Music

CLUE 1 Addition

To open the ocean vault, count up all the shiny shells collected by the sea kitties.

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



23 + 42 = ☐ → T	26 + 22 = ☐ → N	15 + 14 = ☐ → S
41 + 20 = ☐ → U	37 + 20 = ☐ → P	35 + 52 = ☐ → A
26 + 12 = ☐ → I	24 + 43 = ☐ → R	25 + 44 = ☐ → O
24 + 55 = ☐ → M	31 + 65 = ☐ → H	42 + 36 = ☐ → L
16 + 38 = ☐ → D	33 + 53 = ☐ → V	35 + 62 = ☐ → E
19 + 32 = ☐ → C		

Scratch space:

CLUE 2 Word problems

Solve these story problems about mermaid cats to figure out where the villain swam.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was

L							S
32	34	6	16	15	35	7	

.

There were 40 magic shells. 8 were used up. How many magic shells are left?

Answer: ☐ → **L**

Mermaid Kitty found 16 magic shells yesterday and 18 more today. How many magic shells in all?

Answer: ☐ → **E**

Mermaid Kitty found 11 purr pearls yesterday and 4 more today. How many purr pearls in all?

Answer: ☐ → **P**

There were 10 magic shells. 3 were used up. How many magic shells are left?

Answer: ☐ → **W**

Mermaid Kitty found 3 glitter scales yesterday and 3 more today. How many glitter scales in all?

Answer: ☐ → **F**

Mermaid Kitty lined up 2 rows of 8 magic shells. How many magic shells in all?

Answer: ☐ → **T**

Mermaid Kitty lined up 7 rows of 5 glitter scales. How many glitter scales in all?

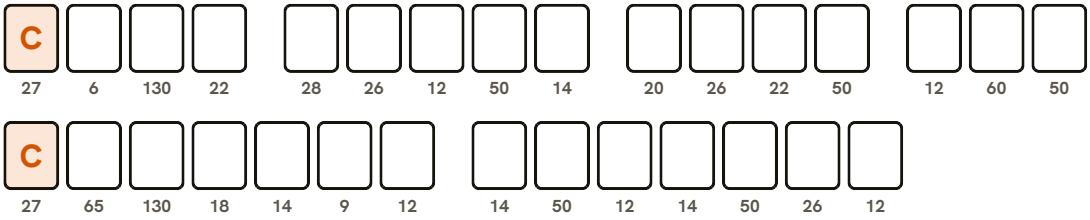
Answer: ☐ → **A**

Scratch space:

CLUE 3 Skip counting

Count the glowing sea stars by twos to unlock the next secret path.

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



Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 ☐ → C

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

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

Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 ☐ → O

Skip-count by 5s. Fill the blank: 5, 10, 15, ___, 25, 30 ☐ → M

Skip-count by 3s. Fill the blank: 3, 6, ___, 12, 15 ☐ → I

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, ___, 21, 24 ☐ → P

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, ___, 14, 16 ☐ → T

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 ☐ → R

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

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

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

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

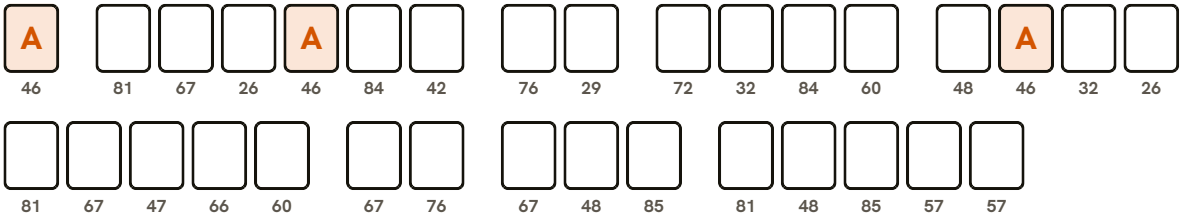
Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 ☐ → **E**

Scratch space:

CLUE 4 Place value

Look at the magic shell counter to check the tens and ones places for clues.

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



What number has 4 tens and 6 ones? ☐ → A

What number has 2 tens and 9 ones? ☐ → F

What number has 4 tens and 8 ones? ☐ → H

What number has 4 tens and 2 ones? ☐ → D

What number has 8 tens and 5 ones? ☐ → E

What number has 3 tens and 2 ones? ☐ → I

What number has 7 tens and 6 ones? ☐ → O

What number has 6 tens and 7 ones? ☐ → T

What number has 2 tens and 6 ones? ☐ → R

What number has 4 tens and 7 ones? ☐ → U

What number has 6 tens and 6 ones? ☐ → C

What number has 7 tens and 2 ones? ☐ → P

What number has 8 tens and 1 one? ☐ → S

What number has 6 tens and 0 ones? ☐ → K

What number has 8 tens and 4 ones? ☐ → N

What number has 5 tens and 7 ones? ☐ → L

Scratch space:

CLUE 5 Missing addends - the last clue

Find how many missing pearls are needed to fill the jar and reveal the last clue.

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:

3 + ___ = 10 ☐	4 + ___ = 15 ☐	10 + ___ = 12 ☐	2 + ___ = 10 ☐
10 + ___ = 11 ☐	7 + ___ = 10 ☐	5 + ___ = 15 ☐	8 + ___ = 20 ☐
10 + ___ = 15 ☐	9 + ___ = 18 ☐	2 + ___ = 8 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain waved the pearl wand, then rang the fish bell.
2. The villain swung the bubble staff, then clicked the glow collar.
3. The villain swung the bubble staff, then fired the yarn blaster.
4. The villain tapped the star gem, then clicked the glow collar.
5. The villain shone the rainbow orb, then fired the yarn blaster.
6. The villain played the shell flute, then wrapped in the catnip cloak.
7. The villain swung the bubble staff, then wrapped in the catnip cloak.
8. The villain tapped the star gem, then wrapped in the catnip cloak.
9. The villain shone the rainbow orb, then rang the fish bell.
10. The villain waved the pearl wand, then checked the purr compass.
11. The villain played the shell flute, then rang the fish bell.
12. The villain swung the bubble staff, then rang the fish bell.

TEACHER / PARENT

Answer Key

The Case of the Missing Rainbow Pearl

Culprit: Barnaby Bubbly

Star Gem · Glow Collar · Left Paws · Pink Hair · Cold Water

Trail: Start 21 → Clue 1 17 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT USE A PURR COMPASS"

23 + 42 = 65 (T) · 26 + 22 = 48 (N) · 15 + 14 = 29 (S) · 41 + 20 = 61 (U) · 37 + 20 = 57 (P) · 35 + 52 = 87 (A) · 26 + 12 = 38 (I) · 24 + 43 = 67 (R) · 25 + 44 = 69 (O) · 24 + 55 = 79 (M) · 31 + 65 = 96 (H) · 42 + 36 = 78 (L) · 16 + 38 = 54 (D) · 33 + 53 = 86 (V) · 35 + 62 = 97 (E) · 19 + 32 = 51 (C)

Clue 2 (Word problems): "LEFT PAWS"

There were 40 magic shells. 8 were used up. How many magic shells are left? = 32 (L) · Mermaid Kitty found 16 magic shells yesterday and 18 more today. How many magic shells in all? = 34 (E) · Mermaid Kitty found 11 purr pearls yesterday and 4 more today. How many purr pearls in all? = 15 (P) · There were 10 magic shells. 3 were used up. How many magic shells are left? = 7 (W) · Mermaid Kitty found 3 glitter scales yesterday and 3 more today. How many glitter scales in all? = 6 (F) · Mermaid Kitty lined up 2 rows of 8 magic shells. How many magic shells in all? = 16 (T) · Mermaid Kitty lined up 7 rows of 5 glitter scales. How many glitter scales in all? = 35 (A)

Clue 3 (Skip counting): "COLD WATER MADE THE CULPRIT RETREAT"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, ___, 30, 33 = 27 (C) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, ___, 70, 80 = 60 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 = 28 (W) · Skip-count by 2s. Fill the blank: 2, 4, ___, 8, 10 = 6 (O) · Skip-count by 5s. Fill the blank: 5, 10, 15, ___, 25, 30 = 20 (M) · Skip-count by 3s. Fill the blank: 3, 6, ___, 12, 15 = 9 (I) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, ___, 21, 24 = 18 (P) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, ___, 14, 16 = 12 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 = 14 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, ___, 24, 26 = 22 (D) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, ___, 140, 150 = 130 (L) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, ___, 70, 75 = 65 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, ___, 60, 70 = 50 (E)

Clue 4 (Place value): "A STRAND OF PINK HAIR STUCK TO THE SHELL"

What number has 4 tens and 6 ones? = 46 (A) · What number has 2 tens and 9 ones? = 29 (F) · What number has 4 tens and 8 ones? = 48 (H) · What number has 4 tens and 2 ones? = 42 (D) · What number has 8 tens and 5 ones? = 85 (E) · What number has 3 tens and 2 ones? = 32 (I) · What number has 7 tens and 6 ones? = 76 (O) · What number has 6 tens and 7 ones? = 67 (T) · What number has 2 tens and 6 ones? = 26 (R) · What number has 4 tens and 7 ones? = 47 (U) · What number has 6 tens and 6 ones? = 66 (C) · What number has 7 tens and 2 ones? = 72 (P) · What number has 8 tens and 1 one? = 81 (S) · What number has 6 tens and 0 ones? = 60 (K) · What number has 8 tens and 4 ones? = 84 (N) · What number has 5 tens and 7 ones? = 57 (L)

Clue 5 (Missing addends): surviving statement is box 4 → Barnaby Bubbly

3 + ___ = 10 = 7 · 4 + ___ = 15 = 11 · 10 + ___ = 12 = 2 · 2 + ___ = 10 = 8 · 10 + ___ = 11 = 1 · 7 + ___ = 10 = 3 · 5 + ___ = 15 = 10 · 8 + ___ = 20 = 12 · 10 + ___ = 15 = 5 · 9 + ___ = 18 = 9 · 2 + ___ = 8 = 6