



The Great Yarn Museum Mystery

Grade 2 math · Addition, Place value, Skip counting, Subtraction, Missing addends · Reading level grades 3-4

Detective: _____ Date: _____

The shiny Golden Catnip Mouse has been swiped from the museum vault! Detective Whisker is on the case, but there are too many suspects. Help us decode the clues and catch the sneaky 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 cat burglar is _____

Possible suspects

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

NAME	PRIMARY SKILL	ESCAPE METHOD	DOMINANT PAW	FUR PATTERN	GREATEST FEAR
Nala	Laser Pointer	Quick Dash	Left pawed	Orange stripes	Water spray
Gizmo	Super Spring	High Leap	Left pawed	Orange stripes	Squeaky mouse
Tigger	Yarn Roll	Night Vision	Left pawed	Orange stripes	Water spray
Bella	Catnip Blast	Scratch Attack	Left pawed	Fluffy white	Water spray
Garfield	Super Spring	Night Vision	Right pawed	Fluffy white	Water spray
Boots	Super Spring	Mega Meow	Left pawed	Sleek black	Water spray
Milo	Laser Pointer	Quick Dash	Left pawed	Fluffy white	Squeaky mouse
Oreo	Catnip Blast	Mega Meow	Left pawed	Orange stripes	Water spray
Oliver	Yarn Roll	Quick Dash	Right pawed	Orange stripes	Water spray
Felix	Laser Pointer	Scratch Attack	Left pawed	Sleek black	Water spray
Chloe	Silent Paws	High Leap	Right pawed	Orange stripes	Squeaky mouse
Loki	Laser Pointer	Night Vision	Right pawed	Fluffy white	Squeaky mouse
Tom	Yarn Roll	Scratch Attack	Left pawed	Sleek black	Squeaky mouse
Sylvester	Laser Pointer	High Leap	Left pawed	Fluffy white	Water spray
Socks	Silent Paws	Scratch Attack	Left pawed	Orange stripes	Water spray
Simba	Super Spring	High Leap	Left pawed	Orange stripes	Water spray
Cleo	Laser Pointer	Mega Meow	Left pawed	Fluffy white	Squeaky mouse
Luna	Laser Pointer	Quick Dash	Left pawed	Fluffy white	Crinkly bag
Whiskers	Laser Pointer	Mega Meow	Left pawed	Orange stripes	Squeaky mouse
Mittens	Silent Paws	Night Vision	Left pawed	Orange stripes	Squeaky mouse
Smokey	Super Spring	Quick Dash	Right pawed	Fluffy white	Crinkly bag

CLUE 1 Addition

Detective Whisker counts the empty cat food cans in the alleyway. Add the cans from the morning patrol to the cans found by the dumpster to reveal our first clue.

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

T 66	85	72	T 66	85	40	72	28	68	79	72	81	96	79	T 66	85	69	74	72
96	40	91	85	T 66	74	40	81	40	79	96								

$28 + 38 = \square \rightarrow \text{T}$	$50 + 46 = \square \rightarrow \text{N}$	$18 + 10 = \square \rightarrow \text{F}$
$41 + 27 = \square \rightarrow \text{D}$	$41 + 31 = \square \rightarrow \text{E}$	$28 + 12 = \square \rightarrow \text{I}$
$56 + 29 = \square \rightarrow \text{H}$	$52 + 29 = \square \rightarrow \text{S}$	$40 + 34 = \square \rightarrow \text{V}$
$34 + 45 = \square \rightarrow \text{O}$	$26 + 43 = \square \rightarrow \text{A}$	$35 + 56 = \square \rightarrow \text{G}$

Scratch space:

CLUE 2 Place value

The museum digital security scanner flashes a warning code. Look at the tens digit and the ones digit on the screen to unlock the next piece of evidence.

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

T			T												
95	43	80	95	43	26	80	72	25	35	24	87	25	80	48	84
						T		T						T	
13	84	46	80	52	26	95	43	95	43	80	14	80	72	95	28

What number has 9 tens and 5 ones? → **T**

What number has 1 ten and 4 ones? → **L**

What number has 2 tens and 5 ones? → **K**

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

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

What number has 7 tens and 2 ones? → **F**

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

What number has 5 tens and 2 ones? → **W**

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

What number has 4 tens and 6 ones? → **S**

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

What number has 4 tens and 8 ones? → **D**

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

What number has 8 tens and 4 ones? → **A**

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

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

Scratch space:

CLUE 3 Skip counting

The thief left dusty paw prints across the lobby floor. Count the prints by twos as they jump along the tiles to find where the suspect dropped a hint.

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

T																			
65	33	15	9	18	25	25	80	18	60	40	25	15	15	70	40	55	90	8	
			T																
80	45	80	65	15	55	16	28	55	80	110									

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

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

Skip-count by 10s. Fill the blank: 10, 20, 30, __, 50, 60 → **F**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Scratch space:

CLUE 4
Subtraction

A bowl of milk was left tipped over on the counter. Subtract the spilled ounces of milk from the full bowl to see how much the cat burglar drank before fleeing.

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

W																			
21	59	89	30	77	58	13	30	55	26	58	25	59	24	16	55	41	74	59	13
89	77	55	26	16	16	61	59	24	49	59	58	59							

$48 - 27 = \square \rightarrow \mathbf{W}$	$69 - 20 = \square \rightarrow \mathbf{C}$	$72 - 13 = \square \rightarrow \mathbf{E}$
$59 - 33 = \square \rightarrow \mathbf{A}$	$51 - 38 = \square \rightarrow \mathbf{D}$	$49 - 33 = \square \rightarrow \mathbf{T}$
$56 - 31 = \square \rightarrow \mathbf{G}$	$47 - 17 = \square \rightarrow \mathbf{O}$	$127 - 38 = \square \rightarrow \mathbf{F}$
$31 - 7 = \square \rightarrow \mathbf{S}$	$112 - 35 = \square \rightarrow \mathbf{U}$	$89 - 34 = \square \rightarrow \mathbf{R}$
$43 - 2 = \square \rightarrow \mathbf{I}$	$77 - 3 = \square \rightarrow \mathbf{P}$	$77 - 16 = \square \rightarrow \mathbf{H}$
$81 - 23 = \square \rightarrow \mathbf{N}$		

Scratch space:

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

The museum guards need ten toys to tempt the suspect out of hiding. We only have seven toys ready. Solve for the missing number of toys to get the final 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:

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

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

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

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

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

$5 + \underline{\quad} = 9$

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

$4 + \underline{\quad} = 6$

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

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

$5 + \underline{\quad} = 12$

Step 2 - cross out the sentence with each answer:

1. The villain shines a bright laser pointer, then escapes with a high leap.
2. The villain releases a catnip blast, then escapes with a high leap.
3. The villain creeps on silent paws, then escapes with a high leap.
4. The villain rolls a giant yarn ball, then distracts the guards with a mega meow.
5. The villain bounces on a super spring, then slashes with a scratch attack.
6. The villain creeps on silent paws, then slashes with a scratch attack.
7. The villain rolls a giant yarn ball, then escapes with a high leap.
8. The villain bounces on a super spring, then slips through the dark using night vision.
9. The villain bounces on a super spring, then escapes with a high leap.
10. The villain rolls a giant yarn ball, then speeds away with a quick dash.
11. The villain releases a catnip blast, then distracts the guards with a mega meow.
12. The villain shines a bright laser pointer, then speeds away with a quick dash.

Answer Key

The Great Yarn Museum Mystery

Culprit: Simba

Super Spring · High Leap · Left pawed · Orange stripes · Water spray

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT HAVE NIGHT VISION"

$28 + 38 = 66$ (T) · $50 + 46 = 96$ (N) · $18 + 10 = 28$ (F) · $41 + 27 = 68$ (D) · $41 + 31 = 72$ (E) · $28 + 12 = 40$ (I) · $56 + 29 = 85$ (H) · $52 + 29 = 81$ (S) · $40 + 34 = 74$ (V) · $34 + 45 = 79$ (O) · $26 + 43 = 69$ (A) · $35 + 56 = 91$ (G)

Clue 2 (Place value): "THE THIEF KNOCKED A VASE WITH THE LEFT PAW"

What number has 9 tens and 5 ones? = 95 (T) · What number has 1 ten and 4 ones? = 14 (L) · What number has 2 tens and 5 ones? = 25 (K) · What number has 3 tens and 5 ones? = 35 (N) · What number has 2 tens and 4 ones? = 24 (O) · What number has 7 tens and 2 ones? = 72 (F) · What number has 2 tens and 8 ones? = 28 (P) · What number has 5 tens and 2 ones? = 52 (W) · What number has 4 tens and 3 ones? = 43 (H) · What number has 4 tens and 6 ones? = 46 (S) · What number has 8 tens and 7 ones? = 87 (C) · What number has 4 tens and 8 ones? = 48 (D) · What number has 1 ten and 3 ones? = 13 (V) · What number has 8 tens and 4 ones? = 84 (A) · What number has 2 tens and 6 ones? = 26 (I) · What number has 8 tens and 0 ones? = 80 (E)

Clue 3 (Skip counting): "THE VILLAIN FLEED FROM A WATER SPRAY"

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, __, 18, 21 = 15 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, __, 50, 60 = 40 (F) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (V) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (N) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 = 16 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (H) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (M) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (Y) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, __, 20, 22 = 18 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (P)

Clue 4 (Subtraction): "WE FOUND ORANGE STRIPED FUR AT THE SCENE"

$48 - 27 = 21$ (W) · $69 - 20 = 49$ (C) · $72 - 13 = 59$ (E) · $59 - 33 = 26$ (A) · $51 - 38 = 13$ (D) · $49 - 33 = 16$ (T) · $56 - 31 = 25$ (G) · $47 - 17 = 30$ (O) · $127 - 38 = 89$ (F) · $31 - 7 = 24$ (S) · $112 - 35 = 77$ (U) · $89 - 34 = 55$ (R) · $43 - 2 = 41$ (I) · $77 - 3 = 74$ (P) · $77 - 16 = 61$ (H) · $81 - 23 = 58$ (N)

Clue 5 (Missing addends): surviving statement is box 9 → Simba

$7 + \underline{\quad} = 18 = 11$ · $9 + \underline{\quad} = 21 = 12$ · $1 + \underline{\quad} = 7 = 6$ · $1 + \underline{\quad} = 4 = 3$ · $3 + \underline{\quad} = 4 = 1$ · $5 + \underline{\quad} = 9 = 4$ · $3 + \underline{\quad} = 13 = 10$ · $4 + \underline{\quad} = 6 = 2$ · $2 + \underline{\quad} = 7 = 5$ · $6 + \underline{\quad} = 14 = 8$ · $5 + \underline{\quad} = 12 = 7$