



The Great Treehouse Mystery

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

Detective: _____ Date: _____

Someone took the Golden Treehouse Trophy right before the big club meeting! The Treehouse Club needs your help to find the sneaky thief and get the trophy back.

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 Trophy Thief is _____

Possible suspects

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

NAME	SECRET TOOL	CLUB BADGE	WRITING HAND	COSTUME FIBER	SECRET WEAKNESS
Leo	bubble launcher	gold star badge	writes right handed	blue yarn fuzz	scared of frogs
Kai	glide wings	silver compass badge	writes right handed	green yarn fuzz	ticklish on toes
Eli	spy walkie	gold star badge	writes right handed	red yarn fuzz	ticklish on toes
Amy	bubble launcher	gold star badge	writes right handed	blue yarn fuzz	hates cold water
Fay	bubble launcher	silver compass badge	writes left handed	blue yarn fuzz	ticklish on toes
Mae	bubble launcher	silver compass badge	writes left handed	blue yarn fuzz	scared of frogs
Gus	grappling hook	bronze binocular badge	writes right handed	red yarn fuzz	hates cold water
Ted	laser flashlight	blue anchor badge	writes left handed	blue yarn fuzz	hates cold water
Hal	laser flashlight	bronze binocular badge	writes right handed	blue yarn fuzz	scared of frogs
Ivy	grappling hook	blue anchor badge	writes right handed	blue yarn fuzz	scared of frogs
Rex	spy walkie	silver compass badge	writes left handed	green yarn fuzz	scared of frogs
Meg	grappling hook	silver compass badge	writes right handed	green yarn fuzz	hates cold water
Art	bubble launcher	green ranger badge	writes right handed	blue yarn fuzz	scared of frogs
Dan	grappling hook	silver compass badge	writes right handed	red yarn fuzz	scared of frogs
Sam	laser flashlight	blue anchor badge	writes right handed	blue yarn fuzz	hates cold water
Mia	bubble launcher	silver compass badge	writes right handed	blue yarn fuzz	scared of frogs
Joy	spy walkie	gold star badge	writes right handed	red yarn fuzz	scared of frogs
Eva	spy walkie	bronze binocular badge	writes left handed	blue yarn fuzz	scared of frogs
Ned	laser flashlight	bronze binocular badge	writes right handed	blue yarn fuzz	ticklish on toes
Zoe	laser flashlight	bronze binocular badge	writes left handed	red yarn fuzz	ticklish on toes
Max	laser flashlight	blue anchor badge	writes left handed	red yarn fuzz	scared of frogs

CLUE 1 Addition

We found two piles of muddy footprints by the slide. Let us add the big prints and the small prints to see how many there are in total.

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

T			T															
52	55	73	52	55	81	73	41	64	50	73	97	54	50	52	42	73	71	69
71	43	69	73	73	54	69	71	54	43	73	69	83	71	64	43	73		

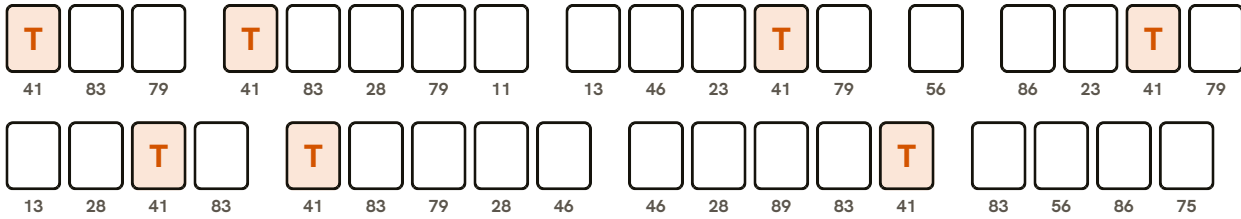
$22 + 30 = \square \rightarrow \text{D}$	$24 + 31 = \square \rightarrow \text{H}$	$15 + 35 = \square \rightarrow \text{O}$
$20 + 44 = \square \rightarrow \text{D}$	$32 + 37 = \square \rightarrow \text{R}$	$19 + 24 = \square \rightarrow \text{G}$
$18 + 23 = \square \rightarrow \text{F}$	$19 + 35 = \square \rightarrow \text{N}$	$39 + 34 = \square \rightarrow \text{E}$
$47 + 36 = \square \rightarrow \text{B}$	$57 + 24 = \square \rightarrow \text{I}$	$56 + 41 = \square \rightarrow \text{S}$
$30 + 12 = \square \rightarrow \text{W}$	$50 + 21 = \square \rightarrow \text{A}$	

Scratch space:

CLUE 2 Place value

The lock on the gear box needs a secret code. Look at the tens and ones blocks on the note to find the right number.

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



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

What number has 7 tens and 5 ones? → **D**

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

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

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

What number has 8 tens and 6 ones? → **N**

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

What number has 8 tens and 9 ones? → **G**

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

What number has 7 tens and 9 ones? → **E**

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

What number has 2 tens and 3 ones? → **O**

Scratch space:

CLUE 3

Subtraction

Some of our snack boxes are missing from the cooler. We had ten but now we have less. Subtract to find how many the thief took.

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

T			T															
60	41	72	60	41	81	72	30	58	40	26	40	82	40	65	82	41	72	26
40	29	58	72	72	26	30	58	68	29	14	66	23	17	72	56			

$89 - 29 = \square \rightarrow \text{**T**}$

$45 - 31 = \square \rightarrow \text{**J**}$

$75 - 17 = \square \rightarrow \text{**R**}$

$51 - 34 = \square \rightarrow \text{**P**}$

$42 - 2 = \square \rightarrow \text{**A**}$

$60 - 34 = \square \rightarrow \text{**N**}$

$96 - 28 = \square \rightarrow \text{**O**}$

$70 - 40 = \square \rightarrow \text{**F**}$

$120 - 38 = \square \rightarrow \text{**W**}$

$106 - 34 = \square \rightarrow \text{**E**}$

$60 - 4 = \square \rightarrow \text{**D**}$

$62 - 39 = \square \rightarrow \text{**M**}$

$99 - 34 = \square \rightarrow \text{**Y**}$

$84 - 18 = \square \rightarrow \text{**U**}$

$58 - 17 = \square \rightarrow \text{**H**}$

$101 - 20 = \square \rightarrow \text{**I**}$

$62 - 33 = \square \rightarrow \text{**G**}$

Scratch space:

CLUE 4 Skip counting

The thief climbed the giant oak tree by skipping steps. Skip count the numbers on the branches to follow their path.

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

B															
20	15	80	45	16	14	28	21	55	80	60	60	130	14	18	
18	10	80	90	140	10	50	10	27	45	15	14	42	42	45	28

Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 → **B**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Scratch space:

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

We need eight shiny club keys to open the big map case. We only have five. How many more keys do we need to find?

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:

$6 + \underline{\quad} = 18$

$7 + \underline{\quad} = 11$

$8 + \underline{\quad} = 10$

$5 + \underline{\quad} = 16$

$6 + \underline{\quad} = 11$

$3 + \underline{\quad} = 6$

$10 + \underline{\quad} = 16$

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

$2 + \underline{\quad} = 11$

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

$7 + \underline{\quad} = 15$

Step 2 - cross out the sentence with each answer:

1. The villain zips down the backyard slide, then grabs the secret map of the park.
2. The villain climbs up the wooden ladder, then steals the fancy walkie talkies.
3. The villain swings on a thick rope, then takes the box of chocolate cookies.
4. The villain swings on a thick rope, then pockets the club rulebook.
5. The villain zips down the backyard slide, then steals the fancy walkie talkies.
6. The villain climbs up the wooden ladder, then pockets the club rulebook.
7. The villain crawls through the secret hatch, then pockets the club rulebook.
8. The villain crawls through the secret hatch, then steals the fancy walkie talkies.
9. The villain sneaks past the sleeping dog, then steals the fancy walkie talkies.
10. The villain sneaks past the sleeping dog, then grabs the secret map of the park.
11. The villain zips down the backyard slide, then pockets the club rulebook.
12. The villain sneaks past the sleeping dog, then snatches the shining golden trophy.

Answer Key

The Great Treehouse Mystery

Culprit: Mia

bubble launcher · silver compass badge · writes right handed · blue yarn fuzz · scared of frogs

Trail: Start 21 → Clue 1 20 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT WEAR A GREEN RANGER BADGE"

$22 + 30 = 52$ (T) · $24 + 31 = 55$ (H) · $15 + 35 = 50$ (O) · $20 + 44 = 64$ (D) · $32 + 37 = 69$ (R) · $19 + 24 = 43$ (G) · $18 + 23 = 41$ (F) · $19 + 35 = 54$ (N) · $39 + 34 = 73$ (E) · $47 + 36 = 83$ (B) · $57 + 24 = 81$ (I) · $56 + 41 = 97$ (S) · $30 + 12 = 42$ (W) · $50 + 21 = 71$ (A)

Clue 2 (Place value): "THE THIEF WROTE A NOTE WITH THEIR RIGHT HAND"

What number has 4 tens and 1 one? = 41 (T) · What number has 7 tens and 5 ones? = 75 (D) · What number has 2 tens and 8 ones? = 28 (I) · What number has 8 tens and 3 ones? = 83 (H) · What number has 1 ten and 1 one? = 11 (F) · What number has 8 tens and 6 ones? = 86 (N) · What number has 4 tens and 6 ones? = 46 (R) · What number has 8 tens and 9 ones? = 89 (G) · What number has 1 ten and 3 ones? = 13 (W) · What number has 7 tens and 9 ones? = 79 (E) · What number has 5 tens and 6 ones? = 56 (A) · What number has 2 tens and 3 ones? = 23 (O)

Clue 3 (Subtraction): "THE THIEF RAN AWAY WHEN A GREEN FROG JUMPED"

$89 - 29 = 60$ (T) · $45 - 31 = 14$ (J) · $75 - 17 = 58$ (R) · $51 - 34 = 17$ (P) · $42 - 2 = 40$ (A) · $60 - 34 = 26$ (N) · $96 - 28 = 68$ (O) · $70 - 40 = 30$ (F) · $120 - 38 = 82$ (W) · $106 - 34 = 72$ (E) · $60 - 4 = 56$ (D) · $62 - 39 = 23$ (M) · $99 - 34 = 65$ (Y) · $84 - 18 = 66$ (U) · $58 - 17 = 41$ (H) · $101 - 20 = 81$ (I) · $62 - 33 = 29$ (G)

Clue 4 (Skip counting): "BLUE YARN FUZZ WAS STUCK TO THE LADDER"

Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 = 20 (B) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (F) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, __, 30, 32 = 28 (R) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (Z) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (T) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, __, 18, 21 = 15 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, __, 100, 110 = 90 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (D) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 = 50 (O) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, __, 18, 20 = 16 (Y) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (K) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, __, 20, 22 = 18 (S) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (A) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, __, 90, 100 = 80 (U)

Clue 5 (Missing addends): surviving statement is box 10 → Mia

$6 + \underline{\quad} = 18 = 12$ · $7 + \underline{\quad} = 11 = 4$ · $8 + \underline{\quad} = 10 = 2$ · $5 + \underline{\quad} = 16 = 11$ · $6 + \underline{\quad} = 11 = 5$ · $3 + \underline{\quad} = 6 = 3$ · $10 + \underline{\quad} = 16 = 6$ · $3 + \underline{\quad} = 10 = 7$ · $2 + \underline{\quad} = 11 = 9$ · $3 + \underline{\quad} = 4 = 1$ · $7 + \underline{\quad} = 15 = 8$