



The Great Treehouse Mystery

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

Detective: _____ **Date:** _____

Someone took the Golden Compass from our secret treehouse! We must follow the trail, solve the clues, and find the sneaky Prankster before the sun goes down. Ready, team? Let us solve this mystery!

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 Prankster is _____

Possible suspects

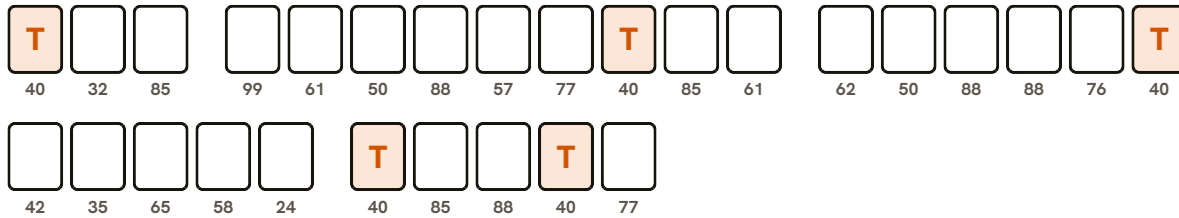
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	EXPLORER SKILL	SPECIAL TALENT	WRITING HAND	HAIR COLOR	BIGGEST FEAR
Emma	map reader	tent builder	right handed	black hair	scared of bugs
Rex	tree climber	berry finder	right handed	blonde hair	scared of frogs
Zoe	map reader	star gazer	left handed	brown hair	scared of bugs
Leo	night watcher	berry finder	left handed	blonde hair	scared of frogs
Jake	night watcher	bridge maker	right handed	blonde hair	scared of mud
Zack	trail runner	star gazer	right handed	black hair	scared of mud
Max	tree climber	berry finder	right handed	brown hair	scared of frogs
Abby	map reader	tent builder	left handed	blonde hair	scared of mud
Ruby	tree climber	animal caller	right handed	blonde hair	scared of frogs
Nora	tree climber	berry finder	left handed	blonde hair	scared of bugs
Eli	trail runner	animal caller	right handed	brown hair	scared of bugs
Dan	trail runner	berry finder	right handed	blonde hair	scared of frogs
Toby	tree climber	bridge maker	right handed	blonde hair	scared of mud
Cole	tree climber	star gazer	left handed	black hair	scared of mud
Ben	trail runner	star gazer	right handed	brown hair	scared of mud
Amy	map reader	star gazer	right handed	black hair	scared of mud
Luke	trail runner	bridge maker	right handed	blonde hair	scared of frogs
Finn	rope glider	star gazer	right handed	black hair	scared of frogs
Ava	rope glider	tent builder	left handed	black hair	scared of frogs
Lily	trail runner	tent builder	right handed	blonde hair	scared of frogs
Mia	map reader	bridge maker	right handed	brown hair	scared of frogs

CLUE 1 Place value

We found a wooden safe. It has digit keys for tens and ones. Count the base ten blocks to unlock it.

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



What number has 4 tens and 0 ones? → **T**

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

What number has 7 tens and 7 ones? → **S**

What number has 9 tens and 9 ones? → **P**

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

What number has 5 tens and 8 ones? → **L**

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

What number has 6 tens and 1 one? → **R**

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

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

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

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

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

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

What number has 5 tens and 0 ones? → **A**

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

Scratch space:

CLUE 2 Addition

We must pack our gear. We put some flashlights and rope in our bags. Add them up to get the total.

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

T																		
94	71	76	53	78	51	76	61	89	76	70	76	55	80	51	30	36	80	30

T						T					
94	71	76	70	97	28	71	94	61	97	36	76

$33 + 61 = \square \rightarrow$ T	$28 + 42 = \square \rightarrow$ R	$26 + 27 = \square \rightarrow$ C
$46 + 30 = \square \rightarrow$ E	$38 + 17 = \square \rightarrow$ F	$13 + 17 = \square \rightarrow$ N
$26 + 54 = \square \rightarrow$ O	$59 + 30 = \square \rightarrow$ W	$15 + 21 = \square \rightarrow$ D
$27 + 34 = \square \rightarrow$ S	$36 + 42 = \square \rightarrow$ L	$42 + 29 = \square \rightarrow$ H
$30 + 67 = \square \rightarrow$ I	$27 + 24 = \square \rightarrow$ U	$16 + 12 = \square \rightarrow$ G

Scratch space:

CLUE 3
Subtraction

The thief took some items. We had ten maps but some are gone. Subtract to find the missing maps.

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

W																
83	37	39	31	40	79	23	39	13	31	65	27	13	14	32	12	16

79	37	14	13	27	15	37	37	16	32	14	67	37

$119 - 36 = \square \rightarrow \boxed{\text{W}}$

$28 - 1 = \square \rightarrow \boxed{\text{T}}$

$60 - 21 = \square \rightarrow \boxed{\text{F}}$

$37 - 6 = \square \rightarrow \boxed{\text{O}}$

$47 - 34 = \square \rightarrow \boxed{\text{R}}$

$27 - 13 = \square \rightarrow \boxed{\text{A}}$

$39 - 27 = \square \rightarrow \boxed{\text{K}}$

$46 - 14 = \square \rightarrow \boxed{\text{C}}$

$28 - 13 = \square \rightarrow \boxed{\text{H}}$

$46 - 9 = \square \rightarrow \boxed{\text{E}}$

$69 - 2 = \square \rightarrow \boxed{\text{P}}$

$82 - 3 = \square \rightarrow \boxed{\text{N}}$

$17 - 1 = \square \rightarrow \boxed{\text{S}}$

$101 - 36 = \square \rightarrow \boxed{\text{G}}$

$66 - 26 = \square \rightarrow \boxed{\text{U}}$

$48 - 25 = \square \rightarrow \boxed{\text{D}}$

Scratch space:

CLUE 4

The wooden path has steps. We must jump by twos to stay safe. Skip count to the end of the path.

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

12 35 33 55 140 110 39 35 50 36 45 9 100 65 39 33 12 45 9

25 12 65 36 45 39 110 100 30 100 20

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

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

Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 → **K**

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

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

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

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

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

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

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

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

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 → **B**

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

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

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

Scratch space:

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

We want to build a bridge. We need ten logs. We have six logs now. How many more do 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:

$10 + \underline{\quad} = 11$

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

$7 + \underline{\quad} = 12$

$6 + \underline{\quad} = 9$

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

$2 + \underline{\quad} = 14$

$5 + \underline{\quad} = 7$

$2 + \underline{\quad} = 12$

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

$10 + \underline{\quad} = 19$

$4 + \underline{\quad} = 8$

Step 2 - cross out the sentence with each answer:

1. The villain dashes through the bushes, then gathers sweet wild berries.
2. The villain climbs the big oak tree, then sets up a small camp.
3. The villain watches the dark trail, then crosses the wooden bridge.
4. The villain dashes through the bushes, then sets up a small camp.
5. The villain dashes through the bushes, then crosses the wooden bridge.
6. The villain climbs the big oak tree, then gathers sweet wild berries.
7. The villain climbs the big oak tree, then makes a loud bird call.
8. The villain checks the old trail map, then points up at the big dipper.
9. The villain zips down the rope, then gathers sweet wild berries.
10. The villain watches the dark trail, then points up at the big dipper.
11. The villain checks the old trail map, then sets up a small camp.
12. The villain watches the dark trail, then makes a loud bird call.

Answer Key

The Great Treehouse Mystery

Culprit: Ruby

tree climber · animal caller · right handed · blonde hair · scared of frogs

Trail: Start 21 → Clue 1 17 → Clue 2 13 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE PRANKSTER CANNOT BUILD TENTS"

What number has 4 tens and 0 ones? = 40 (T) · What number has 6 tens and 2 ones? = 62 (C) · What number has 7 tens and 7 ones? = 77 (S) · What number has 9 tens and 9 ones? = 99 (P) · What number has 3 tens and 2 ones? = 32 (H) · What number has 5 tens and 8 ones? = 58 (L) · What number has 3 tens and 5 ones? = 35 (U) · What number has 6 tens and 1 one? = 61 (R) · What number has 2 tens and 4 ones? = 24 (D) · What number has 8 tens and 8 ones? = 88 (N) · What number has 5 tens and 7 ones? = 57 (K) · What number has 8 tens and 5 ones? = 85 (E) · What number has 7 tens and 6 ones? = 76 (O) · What number has 4 tens and 2 ones? = 42 (B) · What number has 5 tens and 0 ones? = 50 (A) · What number has 6 tens and 5 ones? = 65 (I)

Clue 2 (Addition): "THE CLUES WERE FOUND ON THE RIGHT SIDE"

$33 + 61 = 94$ (T) · $28 + 42 = 70$ (R) · $26 + 27 = 53$ (C) · $46 + 30 = 76$ (E) · $38 + 17 = 55$ (F) · $13 + 17 = 30$ (N) · $26 + 54 = 80$ (O) · $59 + 30 = 89$ (W) · $15 + 21 = 36$ (D) · $27 + 34 = 61$ (S) · $36 + 42 = 78$ (L) · $42 + 29 = 71$ (H) · $30 + 67 = 97$ (I) · $27 + 24 = 51$ (U) · $16 + 12 = 28$ (G)

Clue 3 (Subtraction): "WE FOUND FROG TRACKS NEAR THE ESCAPE"

$119 - 36 = 83$ (W) · $28 - 1 = 27$ (T) · $60 - 21 = 39$ (F) · $37 - 6 = 31$ (O) · $47 - 34 = 13$ (R) · $27 - 13 = 14$ (A) · $39 - 27 = 12$ (K) · $46 - 14 = 32$ (C) · $28 - 13 = 15$ (H) · $46 - 9 = 37$ (E) · $69 - 2 = 67$ (P) · $82 - 3 = 79$ (N) · $17 - 1 = 16$ (S) · $101 - 36 = 65$ (G) · $66 - 26 = 40$ (U) · $48 - 25 = 23$ (D)

Clue 4 (Skip counting): "A BRIGHT BLONDE STRAND WAS ON THE KEY"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, __, 14, 16 = 12 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, __, 30, 35 = 25 (W) · Skip-count by 10s. Fill the blank: 10, 20, __, 40, 50 = 30 (K) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (G) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, __, 42, 45 = 39 (T) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (D) · Skip-count by 5s. Fill the blank: 5, 10, 15, __, 25, 30 = 20 (Y) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, __, 70, 75 = 65 (S) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, __, 36, 39 = 33 (R) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 = 50 (L) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, __, 40, 45 = 35 (B) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, __, 50, 55 = 45 (N) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (O) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (I)

Clue 5 (Missing addends): surviving statement is box 7 → Ruby

$10 + \underline{\quad} = 11 = 1$ · $10 + \underline{\quad} = 16 = 6$ · $7 + \underline{\quad} = 12 = 5$ · $6 + \underline{\quad} = 9 = 3$ · $6 + \underline{\quad} = 14 = 8$ · $2 + \underline{\quad} = 14 = 12$ · $5 + \underline{\quad} = 7 = 2$ · $2 + \underline{\quad} = 12 = 10$ · $9 + \underline{\quad} = 20 = 11$ · $10 + \underline{\quad} = 19 = 9$ · $4 + \underline{\quad} = 8 = 4$