The Treehouse Map Mystery

Grade 4 math · Place value, Rounding, Addition, Subtraction, Division · Reading level grades 1-2

Detective: _____ **Date:** _____

Someone took the Golden Island Map from the Treehouse Club! We need to find the Map Snatcher before the ferry leaves.

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 Map Snatcher is _____

Possible suspects

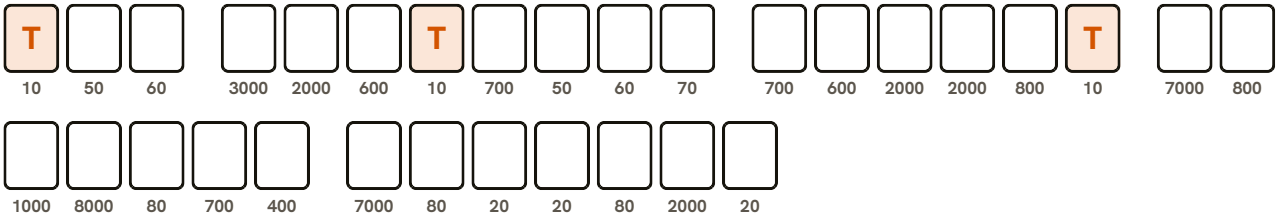
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	EXPLORER GEAR	BEST SKILL	WRITING HAND	HAIR COLOR	HOW TO STOP
Mia	Golden Compass	Rope Swings	Left Handed Writer	Yellow Hair	Squeaky Toys
Meg	Golden Compass	Map Reading	Left Handed Writer	Brown Hair	Tickle Feathers
Ben	Grappling Hook	Rope Swings	Left Handed Writer	Black Hair	Flashlight Beam
Sam	Decoder Ring	Rope Swings	Right Handed Writer	Brown Hair	Squeaky Toys
Fay	Spyglass	Tree Climbing	Right Handed Writer	Yellow Hair	Squeaky Toys
Dan	Spyglass	Quick Digging	Left Handed Writer	Black Hair	Flashlight Beam
Eli	Decoder Ring	Map Reading	Left Handed Writer	Black Hair	Flashlight Beam
Kai	Grappling Hook	Map Reading	Right Handed Writer	Yellow Hair	Tickle Feathers
Tom	Flashlight	Quick Digging	Right Handed Writer	Black Hair	Squeaky Toys
Leo	Golden Compass	Tree Climbing	Left Handed Writer	Black Hair	Squeaky Toys
Max	Grappling Hook	Quick Digging	Left Handed Writer	Yellow Hair	Tickle Feathers
Jax	Flashlight	Quick Digging	Left Handed Writer	Black Hair	Squeaky Toys
Kim	Grappling Hook	Fast Running	Left Handed Writer	Black Hair	Flashlight Beam
Ada	Decoder Ring	Rope Swings	Left Handed Writer	Black Hair	Tickle Feathers
Amy	Grappling Hook	Map Reading	Left Handed Writer	Black Hair	Flashlight Beam
Gus	Golden Compass	Rope Swings	Left Handed Writer	Black Hair	Squeaky Toys
Zoe	Grappling Hook	Tree Climbing	Left Handed Writer	Brown Hair	Tickle Feathers
Ted	Flashlight	Rope Swings	Right Handed Writer	Black Hair	Flashlight Beam
Joy	Golden Compass	Rope Swings	Right Handed Writer	Black Hair	Squeaky Toys
Ivy	Golden Compass	Map Reading	Left Handed Writer	Yellow Hair	Flashlight Beam
Eve	Grappling Hook	Map Reading	Left Handed Writer	Yellow Hair	Flashlight Beam

CLUE 1 Place value

We found a secret code on the treehouse lock. Let us look at the place value of the digits.

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



What is the value of the 1 in 7,318? ☐ → T

What is the value of the 2 in 2,000? ☐ → N

What is the value of the 4 in 498? ☐ → K

What is the value of the 7 in 3,712? ☐ → C

What is the value of the 8 in 801? ☐ → O

What is the value of the 6 in 2,461? ☐ → E

What is the value of the 1 in 1,292? ☐ → Q

What is the value of the 2 in 420? ☐ → G

What is the value of the 5 in 459? ☐ → H

What is the value of the 3 in 3,979? ☐ → S

What is the value of the 7 in 2,171? ☐ → R

What is the value of the 6 in 654? ☐ → A

What is the value of the 8 in 8,347? ☐ → U

What is the value of the 8 in 7,181? ☐ → I

What is the value of the 7 in 17,449? ☐ → D

Scratch space:

CLUE 2 Rounding

Our old compass only shows rounded numbers. We must round the distance to find the path.

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

T						T							T				T		
4300	300	3000	9000	500	2300	4300	90	300	3000	20	200	20	70	4300	3000	9000			

		T		T			T								
200	70	4300	300	4300	300	3000	290	3000	30	4300	300	2300	500	1300	

Round 4,290 to the nearest hundred ☐ → T

Round 23 to the nearest ten ☐ → R

Round 68 to the nearest ten ☐ → I

Round 1,267 to the nearest hundred ☐ → D

Round 26 to the nearest ten ☐ → F

Round 505 to the nearest hundred ☐ → N

Round 234 to the nearest hundred ☐ → W

Round 9,071 to the nearest thousand ☐ → S

Round 90 to the nearest ten ☐ → C

Round 2,326 to the nearest hundred ☐ → A

Round 292 to the nearest ten ☐ → L

Round 3,217 to the nearest thousand ☐ → E

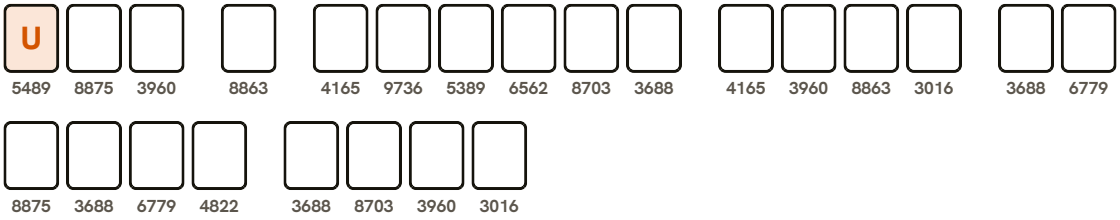
Round 327 to the nearest hundred ☐ → H

Scratch space:

CLUE 3 Addition

We need to add up all the shiny gold coins we found in the grass to get the next hint.

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



2464 + 3025 = ☐ → U	3322 + 3240 = ☐ → G	2966 + 5737 = ☐ → H
1881 + 3508 = ☐ → I	1548 + 2140 = ☐ → T	1821 + 1195 = ☐ → M
1824 + 2998 = ☐ → P	4357 + 2422 = ☐ → O	1578 + 2382 = ☐ → E
3918 + 4945 = ☐ → A	4500 + 4375 = ☐ → S	4810 + 4926 = ☐ → R
2530 + 1635 = ☐ → B		

Scratch space:

CLUE 4 Subtraction

The map says to take steps back. Subtract the smaller steps from the big steps now.

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

1836 - 568 = ☐ → B

5209 - 3507 = ☐ → S

7424 - 3115 = ☐ → H

6235 - 2843 = ☐ → F

5805 - 1557 = ☐ → R

10691 - 2545 = ☐ → O

3398 - 1087 = ☐ → P

7307 - 4720 = ☐ → K

10941 - 3678 = ☐ → N

6175 - 3703 = ☐ → C

11750 - 3274 = ☐ → W

6666 - 3585 = ☐ → D

9061 - 4357 = ☐ → E

5827 - 1603 = ☐ → T

9170 - 384 = ☐ → M

10127 - 1704 = ☐ → A

6661 - 1349 = ☐ → L

Scratch space:

CLUE 5 Division facts (1-12) - the last clue

> We must share our apple slices equally. Divide them up to fuel our search.

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:

108 ÷ 12 = ☐ | 64 ÷ 8 = ☐ | 48 ÷ 8 = ☐ | 21 ÷ 7 = ☐ | 6 ÷ 6 = ☐

66 ÷ 6 = ☐ | 6 ÷ 3 = ☐ | 120 ÷ 10 = ☐ | 45 ÷ 9 = ☐ | 12 ÷ 3 = ☐

56 ÷ 8 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain jumps over the creek, then leaves a muddy boot print.
2. The villain zips down the slide, then snaps a small twig.
3. The villain swings on a vine, then snaps a small twig.
4. The villain sneaks past the tent, then drops a green leaf.
5. The villain sneaks past the tent, then leaves a muddy boot print.
6. The villain jumps over the creek, then loses a yellow badge.
7. The villain climbs up the ladder, then loses a yellow badge.
8. The villain swings on a vine, then leaves a muddy boot print.
9. The villain swings on a vine, then loses a yellow badge.
10. The villain swings on a vine, then drops a green leaf.
11. The villain climbs up the ladder, then drops a shiny coin.
12. The villain jumps over the creek, then snaps a small twig.

TEACHER / PARENT

Answer Key

The Treehouse Map Mystery

Culprit: Ben

Grappling Hook · Rope Swings · Left Handed Writer · Black Hair · Flashlight Beam

Trail: Start 21 → Clue 1 17 → Clue 2 12 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE SNATCHER CANNOT DO QUICK DIGGING"

What is the value of the 1 in 7,318? = 10 (T) · What is the value of the 2 in 2,000? = 2000 (N) · What is the value of the 4 in 498? = 400 (K) · What is the value of the 7 in 3,712? = 700 (C) · What is the value of the 8 in 801? = 800 (O) · What is the value of the 6 in 2,461? = 60 (E) · What is the value of the 1 in 1,292? = 1000 (Q) · What is the value of the 2 in 420? = 20 (G) · What is the value of the 5 in 459? = 50 (H) · What is the value of the 3 in 3,979? = 3000 (S) · What is the value of the 7 in 2,171? = 70 (R) · What is the value of the 6 in 654? = 600 (A) · What is the value of the 8 in 8,347? = 8000 (U) · What is the value of the 8 in 7,181? = 80 (I) · What is the value of the 7 in 17,449? = 7000 (D)

Clue 2 (Rounding): "THE SNATCHER WRITES WITH THE LEFT HAND"

Round 4,290 to the nearest hundred = 4300 (T) · Round 23 to the nearest ten = 20 (R) · Round 68 to the nearest ten = 70 (I) · Round 1,267 to the nearest hundred = 1300 (D) · Round 26 to the nearest ten = 30 (F) · Round 505 to the nearest hundred = 500 (N) · Round 234 to the nearest hundred = 200 (W) · Round 9,071 to the nearest thousand = 9000 (S) · Round 90 to the nearest ten = 90 (C) · Round 2,326 to the nearest hundred = 2300 (A) · Round 292 to the nearest ten = 290 (L) · Round 3,217 to the nearest thousand = 3000 (E) · Round 327 to the nearest hundred = 300 (H)

Clue 3 (Addition): "USE A BRIGHT BEAM TO STOP THEM"

2464 + 3025 = 5489 (U) · 3322 + 3240 = 6562 (G) · 2966 + 5737 = 8703 (H) · 1881 + 3508 = 5389 (I) · 1548 + 2140 = 3688 (T) · 1821 + 1195 = 3016 (M) · 1824 + 2998 = 4822 (P) · 4357 + 2422 = 6779 (O) · 1578 + 2382 = 3960 (E) · 3918 + 4945 = 8863 (A) · 4500 + 4375 = 8875 (S) · 4810 + 4926 = 9736 (R) · 2530 + 1635 = 4165 (B)

Clue 4 (Subtraction): "BLACK STRANDS WERE LEFT ON THE MAP"

1836 - 568 = 1268 (B) · 5209 - 3507 = 1702 (S) · 7424 - 3115 = 4309 (H) · 6235 - 2843 = 3392 (F) · 5805 - 1557 = 4248 (R) · 10691 - 2545 = 8146 (O) · 3398 - 1087 = 2311 (P) · 7307 - 4720 = 2587 (K) · 10941 - 3678 = 7263 (N) · 6175 - 3703 = 2472 (C) · 11750 - 3274 = 8476 (W) · 6666 - 3585 = 3081 (D) · 9061 - 4357 = 4704 (E) · 5827 - 1603 = 4224 (T) · 9170 - 384 = 8786 (M) · 10127 - 1704 = 8423 (A) · 6661 - 1349 = 5312 (L)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Ben

108 ÷ 12 = 9 · 64 ÷ 8 = 8 · 48 ÷ 8 = 6 · 21 ÷ 7 = 3 · 6 ÷ 6 = 1 · 66 ÷ 6 = 11 · 6 ÷ 3 = 2 · 120 ÷ 10 = 12 · 45 ÷ 9 = 5 · 12 ÷ 3 = 4 · 56 ÷ 8 = 7