



# The Treehouse Island Mystery

Grade 3 math · Rounding, Addition, Subtraction, Multiplication, Division · Reading level grades 1-2

Detective: \_\_\_\_\_ Date: \_\_\_\_\_

Someone took the legendary Golden Juice Box from the treehouse vault! As the junior detective, you need to follow the footprints and solve the math clues to find out who did it.

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 Secret Snacker is** \_\_\_\_\_

## Possible suspects

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

| NAME   | EXPLORER TOOL  | BACKPACK GEAR | WRITING HAND | HAIR COLOR  | DISTRACTION |
|--------|----------------|---------------|--------------|-------------|-------------|
| Ella   | slide whistle  | shiny badge   | right handed | brown hair  | bubble gum  |
| Maya   | slide whistle  | juice pack    | left handed  | brown hair  | bubble gum  |
| Grace  | binocular map  | laser pointer | left handed  | brown hair  | funny joke  |
| Sam    | binocular map  | juice pack    | left handed  | yellow hair | bubble gum  |
| Luke   | secret compass | shiny badge   | right handed | yellow hair | squeaky toy |
| Owen   | slide whistle  | shiny badge   | left handed  | brown hair  | bubble gum  |
| Lily   | glow lantern   | mud boots     | left handed  | yellow hair | bubble gum  |
| Sophie | slide whistle  | mud boots     | right handed | yellow hair | bubble gum  |
| Jack   | secret compass | juice pack    | left handed  | red hair    | bubble gum  |
| Cole   | binocular map  | laser pointer | left handed  | brown hair  | squeaky toy |
| Mia    | binocular map  | laser pointer | right handed | yellow hair | squeaky toy |
| Jake   | glow lantern   | mud boots     | right handed | red hair    | funny joke  |
| Emma   | binocular map  | mud boots     | left handed  | brown hair  | squeaky toy |
| Liam   | glow lantern   | mud boots     | left handed  | red hair    | funny joke  |
| Abby   | binocular map  | juice pack    | left handed  | brown hair  | bubble gum  |
| Chloe  | glow lantern   | juice pack    | right handed | red hair    | funny joke  |
| Zoe    | glow lantern   | laser pointer | right handed | brown hair  | bubble gum  |
| Nora   | grappling hook | chalk box     | right handed | brown hair  | squeaky toy |
| Leo    | binocular map  | chalk box     | left handed  | brown hair  | bubble gum  |
| Finn   | secret compass | mud boots     | left handed  | brown hair  | bubble gum  |
| Toby   | binocular map  | laser pointer | left handed  | red hair    | bubble gum  |

### CLUE 1

Our treehouse map shows a fuzzy number. We must round it to the nearest ten to find the coordinates.

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

A number line from 0 to 10,000. The numbers marked in boxes are: 80, 60, 20, 600, 200, 8000, 8000, 9000, 200, 700, 2000, 3000, 20, 90, 700, 3000, and 80. The number 80 is highlighted in orange.

Round 79 to the nearest ten   $\rightarrow$  **T**

Round 3,485 to the nearest thousand  → ☐

Round 87 to the nearest ten   $\rightarrow$  **S**

Round 50 to the nearest ten   $\rightarrow$  **K**

Round 18 to the nearest ten   $\rightarrow$  **E**

Round 8,553 to the nearest thousand   $\rightarrow$  **A**

Round 435 to the nearest hundred   $\rightarrow$  **B**

Round 1,675 to the nearest thousand  → **D**

Round 199 to the nearest hundred   $\rightarrow$

Round 631 to the nearest hundred   $\rightarrow$  **V**

Round 693 to the nearest hundred   $\rightarrow$  **N**

Round 63 to the nearest ten  → **H**

Round 7,620 to the nearest thousand   $\rightarrow$  **L**

Round 758 to the nearest hundred   $\rightarrow$  **C**

Round 901 to the nearest hundred  →

Scratch space:

**CLUE 2** **Addition**

We need to count all our walkie-talkies. We add the old ones and the new ones together.

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

$$219 + 288 = \boxed{\phantom{000}} \rightarrow \boxed{\text{T}}$$

$229 + 329 = \boxed{\phantom{000}} \rightarrow \boxed{\mathbf{A}}$

$503 + 415 = \boxed{\phantom{000}} \rightarrow \boxed{\text{N}}$

$$433 + 387 = \boxed{\phantom{000}} \rightarrow \boxed{\text{L}}$$

$$192 + 374 = \boxed{\phantom{000}} \rightarrow \boxed{\text{I}}$$

$$331 + 167 = \boxed{\phantom{000}} \rightarrow \boxed{\text{R}}$$

$$307 + 188 = \boxed{\phantom{000}} \rightarrow \boxed{\text{O}}$$

$527 + 298 = \boxed{\phantom{000}} \rightarrow \boxed{\text{F}}$

$$330 + 198 = \boxed{\phantom{000}} \rightarrow \boxed{\mathbf{v}}$$

$$209 + 142 = \boxed{\phantom{000}} \rightarrow \boxed{\mathbf{W}}$$

$$255 + 279 = \boxed{\phantom{000}} \rightarrow \boxed{\text{U}}$$

$224 + 172 = \boxed{\phantom{000}} \rightarrow \boxed{\text{E}}$

$308 + 508 = \boxed{\phantom{000}} \rightarrow \boxed{\text{D}}$

$528 + 459 = \boxed{\phantom{000}} \rightarrow \boxed{\text{S}}$

$$120 + 190 = \boxed{\phantom{000}} \rightarrow \boxed{\text{H}}$$

Scratch space:

## CLUE 3

## Subtraction

A sneaky squirrel took some of our spy badges. Let us subtract them to see what is left.

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| T   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 449 | 458 | 890 | 434 | 808 | 890 | 703 | 377 | 238 | 245 | 833 | 890 | 635 | 703 | 434 |  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| T   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 449 | 867 | 703 | 323 | 323 | 890 | 619 | 551 | 238 | 551 | 872 | 551 | 551 | 156 | 890 | 625 | 872 | 624 |

$727 - 278 = \square \rightarrow \boxed{\text{T}}$

$684 - 226 = \square \rightarrow \boxed{\text{H}}$

$839 - 220 = \square \rightarrow \boxed{\text{D}}$

$673 - 122 = \square \rightarrow \boxed{\text{B}}$

$946 - 311 = \square \rightarrow \boxed{\text{W}}$

$943 - 76 = \square \rightarrow \boxed{\text{R}}$

$1220 - 387 = \square \rightarrow \boxed{\text{O}}$

$828 - 125 = \square \rightarrow \boxed{\text{A}}$

$970 - 80 = \square \rightarrow \boxed{\text{E}}$

$995 - 123 = \square \rightarrow \boxed{\text{U}}$

$762 - 137 = \square \rightarrow \boxed{\text{G}}$

$620 - 375 = \square \rightarrow \boxed{\text{F}}$

$805 - 371 = \square \rightarrow \boxed{\text{S}}$

$1035 - 227 = \square \rightarrow \boxed{\text{N}}$

$672 - 295 = \square \rightarrow \boxed{\text{K}}$

$514 - 358 = \square \rightarrow \boxed{\text{L}}$

$367 - 129 = \square \rightarrow \boxed{\text{Y}}$

$368 - 45 = \square \rightarrow \boxed{\text{P}}$

$731 - 107 = \square \rightarrow \boxed{\text{M}}$

Scratch space:

## CLUE 4

## Multiplication facts (1-12)

We pack our snack boxes in neat rows. We multiply the rows to find how many we have.

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

|    |    |   |   |    |     |    |    |    |    |    |    |     |    |   |   |
|----|----|---|---|----|-----|----|----|----|----|----|----|-----|----|---|---|
| W  |    |   |   |    |     |    |    |    |    |    |    |     |    |   |   |
| 48 | 40 | 2 | 4 | 96 | 100 | 64 | 60 | 24 | 25 | 66 | 60 | 100 | 64 | 4 | 2 |

  

|    |    |    |    |   |    |   |    |     |    |    |    |    |
|----|----|----|----|---|----|---|----|-----|----|----|----|----|
|    |    |    |    |   |    | W |    |     |    |    |    |    |
| 64 | 60 | 66 | 88 | 1 | 66 | 4 | 48 | 100 | 99 | 60 | 33 | 66 |

$12 \times 4 =$

→

W

$11 \times 3 =$

→

I

$2 \times 12 =$

→

S

$5 \times 5 =$

→

T

$1 \times 4 =$

→

O

$8 \times 8 =$

→

D

$2 \times 1 =$

→

F

$10 \times 6 =$

→

A

$11 \times 8 =$

→

K

$8 \times 12 =$

→

U

$1 \times 1 =$

→

B

$10 \times 10 =$

→

N

$11 \times 9 =$

→

H

$4 \times 10 =$

→

E

$6 \times 11 =$

→

R

Scratch space:

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

We want to share our map pieces equally. We divide them among our team members.

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:**

$30 \div 3 = \boxed{\phantom{00}}$

$108 \div 12 = \boxed{\phantom{00}}$

$10 \div 5 = \boxed{\phantom{00}}$

$16 \div 2 = \boxed{\phantom{00}}$

$77 \div 11 = \boxed{\phantom{00}}$

$48 \div 12 = \boxed{\phantom{00}}$

$24 \div 4 = \boxed{\phantom{00}}$

$18 \div 6 = \boxed{\phantom{00}}$

$40 \div 8 = \boxed{\phantom{00}}$

$33 \div 3 = \boxed{\phantom{00}}$

$3 \div 3 = \boxed{\phantom{00}}$

**Step 2 - cross out the sentence with each answer:**

1. The villain swings on a rope, then pins on a metal star.
2. The villain plays a loud tune, then pins on a metal star.
3. The villain looks through the lens, then shines a red dot.
4. The villain looks through the lens, then splashes in a puddle.
5. The villain checks the needle, then sips a sweet drink.
6. The villain swings on a rope, then splashes in a puddle.
7. The villain swings on a rope, then shines a red dot.
8. The villain lights up the dark, then shines a red dot.
9. The villain looks through the lens, then sips a sweet drink.
10. The villain plays a loud tune, then sips a sweet drink.
11. The villain plays a loud tune, then shines a red dot.
12. The villain checks the needle, then splashes in a puddle.

# Answer Key

## The Treehouse Island Mystery

### Culprit: Finn

secret compass · mud boots · left handed · brown hair · bubble gum

Trail: Start 21 → Clue 1 19 → Clue 2 12 → Clue 3 8 → Clue 4 4 → Clue 5 1

### Clue 1 (Rounding): "THE VILLAIN DOES NOT HAVE A CHALK BOX"

Round 79 to the nearest ten = 80 (T) · Round 3,485 to the nearest thousand = 3000 (O) · Round 87 to the nearest ten = 90 (S) · Round 50 to the nearest ten = 50 (K) · Round 18 to the nearest ten = 20 (E) · Round 8,553 to the nearest thousand = 9000 (A) · Round 435 to the nearest hundred = 400 (B) · Round 1,675 to the nearest thousand = 2000 (D) · Round 199 to the nearest hundred = 200 (I) · Round 631 to the nearest hundred = 600 (V) · Round 693 to the nearest hundred = 700 (N) · Round 63 to the nearest ten = 60 (H) · Round 7,620 to the nearest thousand = 8000 (L) · Round 758 to the nearest hundred = 800 (C) · Round 901 to the nearest hundred = 900 (X)

### Clue 2 (Addition): "THE VISITOR USED THEIR LEFT HAND TO WRITE"

$219 + 288 = 507$  (T) ·  $229 + 329 = 558$  (A) ·  $503 + 415 = 918$  (N) ·  $433 + 387 = 820$  (L) ·  $192 + 374 = 566$  (I) ·  $331 + 167 = 498$  (R) ·  $307 + 188 = 495$  (O) ·  $527 + 298 = 825$  (F) ·  $330 + 198 = 528$  (V) ·  $209 + 142 = 351$  (W) ·  $255 + 279 = 534$  (U) ·  $224 + 172 = 396$  (E) ·  $308 + 508 = 816$  (D) ·  $528 + 459 = 987$  (S) ·  $120 + 190 = 310$  (H)

### Clue 3 (Subtraction): "THE SNEAKY FOE WAS TRAPPED BY BUBBLE GUM"

$727 - 278 = 449$  (T) ·  $684 - 226 = 458$  (H) ·  $839 - 220 = 619$  (D) ·  $673 - 122 = 551$  (B) ·  $946 - 311 = 635$  (W) ·  $943 - 76 = 867$  (R) ·  $1220 - 387 = 833$  (O) ·  $828 - 125 = 703$  (A) ·  $970 - 80 = 890$  (E) ·  $995 - 123 = 872$  (U) ·  $762 - 137 = 625$  (G) ·  $620 - 375 = 245$  (F) ·  $805 - 371 = 434$  (S) ·  $1035 - 227 = 808$  (N) ·  $672 - 295 = 377$  (K) ·  $514 - 358 = 156$  (L) ·  $367 - 129 = 238$  (Y) ·  $368 - 45 = 323$  (P) ·  $731 - 107 = 624$  (M)

### Clue 4 (Multiplication facts (1-12)): "WE FOUND A STRAND OF DARK BROWN HAIR"

$12 \times 4 = 48$  (W) ·  $11 \times 3 = 33$  (I) ·  $2 \times 12 = 24$  (S) ·  $5 \times 5 = 25$  (T) ·  $1 \times 4 = 4$  (O) ·  $8 \times 8 = 64$  (D) ·  $2 \times 1 = 2$  (F) ·  $10 \times 6 = 60$  (A) ·  $11 \times 8 = 88$  (K) ·  $8 \times 12 = 96$  (U) ·  $1 \times 1 = 1$  (B) ·  $10 \times 10 = 100$  (N) ·  $11 \times 9 = 99$  (H) ·  $4 \times 10 = 40$  (E) ·  $6 \times 11 = 66$  (R)

### Clue 5 (Division facts (1-12)): surviving statement is box 12 → Finn

$30 \div 3 = 10$  ·  $108 \div 12 = 9$  ·  $10 \div 5 = 2$  ·  $16 \div 2 = 8$  ·  $77 \div 11 = 7$  ·  $48 \div 12 = 4$  ·  $24 \div 4 = 6$  ·  $18 \div 6 = 3$  ·  $40 \div 8 = 5$  ·  $33 \div 3 = 11$  ·  $3 \div 3 = 1$