



The Treehouse Mystery

Grade 4 math · Multiplication, Rounding, Place value, Addition, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

The golden camp trophy has vanished from the main lodge! Someone climbed up and swiped it right before the big campfire ceremony. Head Ranger Sally needs your detective skills to search the treehouse camp and track down the runaway suspect.

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 Maple Thief is _____

Possible suspects

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

NAME	SPECIAL GEAR	CAMP BADGE	WRISTBAND WEAR	HELMET COLOR	CAMP FEAR
Gage	Zip Line Pulley	Star Gazing Badge	Left Wristband	Green Helmet	Scared of Spiders
Jax	Grappling Hook	Star Gazing Badge	Left Wristband	Blue Helmet	Hates Mud Puddles
Ava	Zip Line Pulley	Campfire Cooking Badge	Left Wristband	Red Helmet	Hates Mud Puddles
Toby	Zip Line Pulley	Knot Tying Badge	Right Wristband	Green Helmet	Hates Mud Puddles
Luke	Grappling Hook	Knot Tying Badge	Right Wristband	Red Helmet	Hates Mud Puddles
Sam	Grappling Hook	First Aid Badge	Left Wristband	Blue Helmet	Hates Mud Puddles
Kai	Super Spring Boots	Campfire Cooking Badge	Right Wristband	Blue Helmet	Sneezes at Pollen
Maya	Night Vision Goggles	Star Gazing Badge	Left Wristband	Red Helmet	Scared of Spiders
Otis	Glider Wings	Map Reading Badge	Left Wristband	Green Helmet	Hates Mud Puddles
Owen	Grappling Hook	Campfire Cooking Badge	Right Wristband	Red Helmet	Hates Mud Puddles
Ben	Super Spring Boots	Star Gazing Badge	Left Wristband	Blue Helmet	Scared of Spiders
Mia	Super Spring Boots	Star Gazing Badge	Left Wristband	Red Helmet	Hates Mud Puddles
Cody	Super Spring Boots	Campfire Cooking Badge	Right Wristband	Green Helmet	Hates Mud Puddles
Leo	Zip Line Pulley	Map Reading Badge	Right Wristband	Red Helmet	Hates Mud Puddles
Ella	Glider Wings	Map Reading Badge	Right Wristband	Red Helmet	Hates Mud Puddles
Zoe	Night Vision Goggles	Campfire Cooking Badge	Right Wristband	Blue Helmet	Scared of Spiders
Ivy	Zip Line Pulley	First Aid Badge	Right Wristband	Blue Helmet	Sneezes at Pollen
Finn	Night Vision Goggles	Star Gazing Badge	Left Wristband	Red Helmet	Sneezes at Pollen
Skye	Grappling Hook	Map Reading Badge	Left Wristband	Green Helmet	Hates Mud Puddles
Sasha	Super Spring Boots	Campfire Cooking Badge	Right Wristband	Red Helmet	Scared of Spiders
Nora	Glider Wings	First Aid Badge	Right Wristband	Red Helmet	Hates Mud Puddles

CLUE 1
Multiplication facts (1-12)

We found rows of supply boxes in the gear room. Count how many total boxes there are to unlock the first clue.

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

T									T										T
99	84	30	40	63	96	18	15	99	18	2	30	28	96	2	99				
								T											
84	63	49	30	9	15	120	28	99	63	15	18	40	63	18	11	30			

$11 \times 9 = \square \rightarrow \boxed{\text{T}}$

$7 \times 9 = \square \rightarrow \boxed{\text{A}}$

$2 \times 9 = \square \rightarrow \boxed{\text{D}}$

$3 \times 10 = \square \rightarrow \boxed{\text{E}}$

$8 \times 12 = \square \rightarrow \boxed{\text{N}}$

$7 \times 7 = \square \rightarrow \boxed{\text{V}}$

$4 \times 10 = \square \rightarrow \boxed{\text{B}}$

$12 \times 10 = \square \rightarrow \boxed{\text{R}}$

$3 \times 3 = \square \rightarrow \boxed{\text{F}}$

$3 \times 5 = \square \rightarrow \boxed{\text{I}}$

$2 \times 1 = \square \rightarrow \boxed{\text{O}}$

$7 \times 4 = \square \rightarrow \boxed{\text{S}}$

$11 \times 1 = \square \rightarrow \boxed{\text{G}}$

$7 \times 12 = \square \rightarrow \boxed{\text{H}}$

Scratch space:

CLUE 2

The campsite radar screen shows the thief's escape distance. Round the distance to the nearest ten to clear the screen.

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

Diagram illustrating the multiplication of 3000 by 3000, showing the partial products and their sum.

Top row (Partial Products): 3000, 2000, 110, 1300, 900, 9000, 2000, 3000, 5000, 1300, 900, 290, 3000, 20, 70, 200, 1700, 5000, 70, 290.

Bottom row (Partial Products): 290, 200, 70, 9000, 9000, 110, 1700, 7000, 200, 70, 20, 1300, 70, 200, 3700, 2000.

Round 2,884 to the nearest thousand $\rightarrow$ **T**

Round 1,269 to the nearest hundred $\rightarrow$ **R**

Round 3,664 to the nearest hundred $\rightarrow$ **C**

Round 901 to the nearest hundred $\rightarrow$

Round 289 to the nearest ten $\rightarrow$ **S**

Round 9,139 to the nearest thousand → **G**

Round 226 to the nearest hundred → **N**

Round 21 to the nearest ten $\rightarrow$ **B**

Round 1,995 to the nearest thousand → **H**

Round 1,656 to the nearest hundred → **D**

Round 73 to the nearest ten → **A**

Round 106 to the nearest ten $\rightarrow$ **E**

Round 7,223 to the nearest thousand $\rightarrow$

Round 5,165 to the nearest thousand $\rightarrow$ **W**

Scratch space:

CLUE 3 Place value

The lock on the map chest has three dials. Find the value of the digit in the hundreds place to open it.

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

T			T												T		
200	90	20	200	90	2000	20	400	800	60	70	2000	300	20	300	200	90	20
7000	2000	10	30	5000	300	1000	5000	300	300	40	20						

What is the value of the 2 in 258? → T

What is the value of the 5 in 65,229? → U

What is the value of the 4 in 3,642? → L

What is the value of the 3 in 8,736? → M

What is the value of the 1 in 6,312? → G

What is the value of the 3 in 381? → D

What is the value of the 7 in 57,368? → B

What is the value of the 2 in 52,514? → I

What is the value of the 6 in 7,863? → V

What is the value of the 4 in 453? → F

What is the value of the 2 in 429? → E

What is the value of the 8 in 834? → A

What is the value of the 9 in 1,292? → H

What is the value of the 1 in 1,623? → P

What is the value of the 7 in 4,476? → O

Scratch space:

CLUE 4 Addition

Help Ranger Sally count all the leftover trail mix bags. Add the piles together to find the secret note underneath.

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

R																	
6208	6087	7132	4367	6087	5712	2332	6087	7864	6046	2450	9142	5319	7864	4516	2450	4749	

		R															
4749	8162	6208	2450	6046	6087	7132	4763	5319	7864	4367	6087	7864	6208	6087	6087		

$$3766 + 2442 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$842 + 1490 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$3136 + 6006 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$1604 + 846 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$1783 + 2733 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$2892 + 3154 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$2720 + 3367 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$3566 + 4596 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$2437 + 2312 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$3181 + 3951 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$2429 + 2334 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$2682 + 3030 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$4842 + 3022 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$1775 + 3544 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$2014 + 2353 = \boxed{} \rightarrow \boxed{\text{H}}$$

Scratch space:

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

We need to share the rescue ropes equally among the search teams. Divide the ropes 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:

$50 \div 10 = \boxed{}$

$90 \div 9 = \boxed{}$

$81 \div 9 = \boxed{}$

$21 \div 3 = \boxed{}$

$2 \div 1 = \boxed{}$

$18 \div 3 = \boxed{}$

$40 \div 5 = \boxed{}$

$55 \div 5 = \boxed{}$

$132 \div 11 = \boxed{}$

$20 \div 5 = \boxed{}$

$27 \div 9 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain slid down with a zip line pulley, then checked the map to find the secret path.
2. The villain slid down with a zip line pulley, then tracked the stars to find north.
3. The villain bounced high with super spring boots, then patched up a scraped knee.
4. The villain swung up using a grappling hook, then patched up a scraped knee.
5. The villain swung up using a grappling hook, then tied a quick knot to escape.
6. The villain bounced high with super spring boots, then cooked a snack to keep up their energy.
7. The villain bounced high with super spring boots, then checked the map to find the secret path.
8. The villain sneaked past using night vision goggles, then cooked a snack to keep up their energy.
9. The villain swung up using a grappling hook, then cooked a snack to keep up their energy.
10. The villain soared down with glider wings, then checked the map to find the secret path.
11. The villain bounced high with super spring boots, then tracked the stars to find north.
12. The villain soared down with glider wings, then cooked a snack to keep up their energy.

Answer Key

The Treehouse Mystery

Culprit: Leo

Zip Line Pulley · Map Reading Badge · Right Wristband · Red Helmet · Hates Mud Puddles

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE BANDIT DOES NOT HAVE FIRST AID BADGE"

$11 \times 9 = 99$ (T) · $7 \times 9 = 63$ (A) · $2 \times 9 = 18$ (D) · $3 \times 10 = 30$ (E) · $8 \times 12 = 96$ (N) · $7 \times 7 = 49$ (V) · $4 \times 10 = 40$ (B) · $12 \times 10 = 120$ (R) · $3 \times 3 = 9$ (F) · $3 \times 5 = 15$ (I) · $2 \times 1 = 2$ (O) · $7 \times 4 = 28$ (S) · $11 \times 1 = 11$ (G) · $7 \times 12 = 84$ (H)

Clue 2 (Rounding): "THE RIGHT WRISTBAND WAS SNAGGED ON A BRANCH"

Round 2,884 to the nearest thousand = 3000 (T) · Round 1,269 to the nearest hundred = 1300 (R) · Round 3,664 to the nearest hundred = 3700 (C) · Round 901 to the nearest hundred = 900 (I) · Round 289 to the nearest ten = 290 (S) · Round 9,139 to the nearest thousand = 9000 (G) · Round 226 to the nearest hundred = 200 (N) · Round 21 to the nearest ten = 20 (B) · Round 1,995 to the nearest thousand = 2000 (H) · Round 1,656 to the nearest hundred = 1700 (D) · Round 73 to the nearest ten = 70 (A) · Round 106 to the nearest ten = 110 (E) · Round 7,223 to the nearest thousand = 7000 (O) · Round 5,165 to the nearest thousand = 5000 (W)

Clue 3 (Place value): "THE THIEF AVOIDED THE BIG MUD PUDDLE"

What is the value of the 2 in 258? = 200 (T) · What is the value of the 5 in 65,229? = 5000 (U) · What is the value of the 4 in 3,642? = 40 (L) · What is the value of the 3 in 8,736? = 30 (M) · What is the value of the 1 in 6,312? = 10 (G) · What is the value of the 3 in 381? = 300 (D) · What is the value of the 7 in 57,368? = 7000 (B) · What is the value of the 2 in 52,514? = 2000 (I) · What is the value of the 6 in 7,863? = 60 (V) · What is the value of the 4 in 453? = 400 (F) · What is the value of the 2 in 429? = 20 (E) · What is the value of the 8 in 834? = 800 (A) · What is the value of the 9 in 1,292? = 90 (H) · What is the value of the 1 in 1,623? = 1000 (P) · What is the value of the 7 in 4,476? = 70 (O)

Clue 4 (Addition): "RED HELMET PAINT WAS SCRAPED ON THE TREE"

$3766 + 2442 = 6208$ (R) · $842 + 1490 = 2332$ (M) · $3136 + 6006 = 9142$ (I) · $1604 + 846 = 2450$ (A) · $1783 + 2733 = 4516$ (W) · $2892 + 3154 = 6046$ (P) · $2720 + 3367 = 6087$ (E) · $3566 + 4596 = 8162$ (C) · $2437 + 2312 = 4749$ (S) · $3181 + 3951 = 7132$ (D) · $2429 + 2334 = 4763$ (O) · $2682 + 3030 = 5712$ (L) · $4842 + 3022 = 7864$ (T) · $1775 + 3544 = 5319$ (N) · $2014 + 2353 = 4367$ (H)

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

$50 \div 10 = 5$ · $90 \div 9 = 10$ · $81 \div 9 = 9$ · $21 \div 3 = 7$ · $2 \div 1 = 2$ · $18 \div 3 = 6$ · $40 \div 5 = 8$ · $55 \div 5 = 11$ · $132 \div 11 = 12$ · $20 \div 5 = 4$ · $27 \div 9 = 3$