



The Secret Treehouse Mystery

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

Detective: _____ Date: _____

The Golden Juice Box has vanished from the Secret Treehouse Spy Club! The Midnight Prankster snuck past our backyard laser security system and left a trail of crumbs. Grab your spy gear and help us solve the case!

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 Midnight Prankster is _____

Possible suspects

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

NAME	SPY GEAR	DISGUISE KIT	DOMINANT HAND	HAIR COLOR	SILLY FEAR
Ruby	Laser Pointer	Fake Cast	Left-handed	Brown Hair	Ticklish Feet
Luke	Pocket Drone	Wig and Hat	Left-handed	Brown Hair	Sneeze Powder
Noah	Super Snorkel	Detective Coat	Left-handed	Blonde Hair	Sneeze Powder
Maya	Pocket Drone	Wig and Hat	Right-handed	Blonde Hair	Ticklish Feet
Abby	Super Snorkel	Detective Coat	Right-handed	Blonde Hair	Ticklish Feet
Liam	Night Goggles	Clown Nose	Left-handed	Brown Hair	Sneeze Powder
Cole	Pocket Drone	Wig and Hat	Right-handed	Brown Hair	Sneeze Powder
Toby	Laser Pointer	Clown Nose	Left-handed	Red Hair	Hopping Frogs
Mia	Grappling Hook	Wig and Hat	Left-handed	Blonde Hair	Ticklish Feet
Max	Night Goggles	Mustache Glasses	Right-handed	Brown Hair	Sneeze Powder
Emma	Grappling Hook	Wig and Hat	Left-handed	Brown Hair	Ticklish Feet
Ella	Laser Pointer	Detective Coat	Left-handed	Red Hair	Ticklish Feet
Owen	Grappling Hook	Detective Coat	Left-handed	Brown Hair	Sneeze Powder
Alex	Grappling Hook	Fake Cast	Left-handed	Brown Hair	Sneeze Powder
Jack	Laser Pointer	Clown Nose	Left-handed	Red Hair	Ticklish Feet
Sam	Super Snorkel	Clown Nose	Left-handed	Brown Hair	Ticklish Feet
Lily	Laser Pointer	Mustache Glasses	Left-handed	Brown Hair	Sneeze Powder
Finn	Laser Pointer	Wig and Hat	Right-handed	Brown Hair	Hopping Frogs
Leo	Super Snorkel	Clown Nose	Right-handed	Brown Hair	Sneeze Powder
Ryan	Night Goggles	Detective Coat	Right-handed	Red Hair	Sneeze Powder
Zoe	Night Goggles	Wig and Hat	Left-handed	Red Hair	Sneeze Powder

CLUE 1 Rounding

We found a muddy boot print near the base of the oak tree. The distance meter on our radar only gives rounded numbers, so we need to estimate the exact spot to find the first clue.

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

T																T
3700	90	30	1100	1700	70	70	300	1700	3000	370	900	30	290	3000	900	3700
																T
170	30	300	50	300	170	1700	4300	300	3000	370	90	300	3700			

Round 3,705 to the nearest hundred → **T**

Round 1,712 to the nearest hundred → **I**

Round 32 to the nearest ten → **E**

Round 889 to the nearest hundred → **O**

Round 173 to the nearest ten → **W**

Round 4,334 to the nearest hundred → **G**

Round 2,759 to the nearest thousand → **N**

Round 48 to the nearest ten → **R**

Round 303 to the nearest hundred → **A**

Round 374 to the nearest ten → **D**

Round 1,088 to the nearest hundred → **V**

Round 72 to the nearest ten → **L**

Round 87 to the nearest ten → **H**

Round 289 to the nearest ten → **S**

Scratch space:

CLUE 2

We searched the garden bushes and found some dropped walkie talkies. We need to add up all the units we collected to see if we found them all.

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

The diagram illustrates a sequence of numbers arranged in two rows. The top row consists of 18 boxes, and the bottom row consists of 12 boxes. The numbers in the boxes are as follows:

Row	Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8	Box 9	Box 10	Box 11	Box 12	Box 13	Box 14	Box 15	Box 16	Box 17	Box 18	
Top	7840	5139	8966	7670	8032	7670	3757	8966	3875	7840	8032	7670	8966	7670	7840	5139	8966	4670	6483
Bottom	9766	8966	7093	7840	5139	3952	8524	4740											

In the top row, the 10th box (7840) and the 16th box (7840) are shaded orange and contain the letter 'T'. In the bottom row, the 4th box (7840) is shaded orange and contains the letter 'T'.

$$3670 + 4170 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2096 + 3043 = \boxed{} \rightarrow \boxed{\text{H}}$$

$1466 + 2409 = \boxed{} \rightarrow \boxed{\text{C}}$

$$3244 + 5280 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$1986 + 2684 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$5402 + 2630 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$2129 + 2611 = \boxed{} \rightarrow \boxed{\text{D}}$$

$3999 + 4967 = \boxed{} \rightarrow \boxed{\text{E}}$

$$6790 + 2976 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$4121 + 3549 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$2217 + 1540 = \boxed{} \rightarrow \boxed{\text{P}}$$

$2761 + 4332 = \boxed{} \rightarrow \boxed{\text{F}}$

$$4344 + 2139 = \boxed{} \rightarrow \boxed{\text{R}}$$

$1520 + 2432 = \boxed{} \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 3

Subtraction

The prankster raided our secret stash of club snacks. If we subtract the empty wrappers from our total supply, we can see exactly how much they ate.

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

T																
5557	7999	4844	5566	7697	5692	5692	8851	7697	1602	8898	1602	4844	4844	4671	4844	8898

1602	4844	8851	2494	6393	5692	8851	1057	6303	4587	4844	4587	4587	4844	2494

$9718 - 4161 = \square \rightarrow \boxed{\text{T}}$

$6052 - 1381 = \square \rightarrow \boxed{\text{Z}}$

$7755 - 2911 = \square \rightarrow \boxed{\text{E}}$

$8445 - 2142 = \square \rightarrow \boxed{\text{K}}$

$9975 - 1976 = \square \rightarrow \boxed{\text{H}}$

$10374 - 3981 = \square \rightarrow \boxed{\text{B}}$

$13526 - 4675 = \square \rightarrow \boxed{\text{A}}$

$10564 - 1666 = \square \rightarrow \boxed{\text{S}}$

$2930 - 1873 = \square \rightarrow \boxed{\text{C}}$

$6231 - 539 = \square \rightarrow \boxed{\text{L}}$

$7492 - 1926 = \square \rightarrow \boxed{\text{V}}$

$11094 - 3397 = \square \rightarrow \boxed{\text{I}}$

$3985 - 1491 = \square \rightarrow \boxed{\text{R}}$

$4666 - 79 = \square \rightarrow \boxed{\text{P}}$

$3421 - 1819 = \square \rightarrow \boxed{\text{N}}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

We found several rows of suspicious muddy footprints leading to the fence. If we multiply the number of rows by the prints in each row, we can map the escape route.

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

B																			
132	40	60	32	11	35	44	40	6	11	30	35	60	108	90	6	72	40		
32	1	40	1	60	11	44	90	1	40	60	22	1							

$11 \times 12 = \square \rightarrow \text{B}$

$8 \times 4 = \square \rightarrow \text{W}$

$3 \times 2 = \square \rightarrow \text{A}$

$9 \times 12 = \square \rightarrow \text{F}$

$1 \times 1 = \square \rightarrow \text{E}$

$9 \times 8 = \square \rightarrow \text{I}$

$9 \times 10 = \square \rightarrow \text{H}$

$11 \times 2 = \square \rightarrow \text{P}$

$7 \times 5 = \square \rightarrow \text{S}$

$4 \times 11 = \square \rightarrow \text{T}$

$6 \times 10 = \square \rightarrow \text{O}$

$1 \times 11 = \square \rightarrow \text{N}$

$6 \times 5 = \square \rightarrow \text{D}$

$4 \times 10 = \square \rightarrow \text{R}$

Scratch space:

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

We need to divide our detective squad into equal teams to search the neighborhood. Sharing the map pieces evenly will help us pinpoint the prankster.

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:

$10 \div 2 = \boxed{}$

$45 \div 5 = \boxed{}$

$88 \div 8 = \boxed{}$

$80 \div 8 = \boxed{}$

$56 \div 7 = \boxed{}$

$77 \div 11 = \boxed{}$

$12 \div 4 = \boxed{}$

$36 \div 6 = \boxed{}$

$40 \div 10 = \boxed{}$

$84 \div 7 = \boxed{}$

$12 \div 12 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain crawled through the doggy door, then snatched the golden juice box.
2. The villain zipped up the zipline, then hid the master key.
3. The villain climbed the rope ladder, then hid the master key.
4. The villain crawled through the doggy door, then hid the master key.
5. The villain crawled through the doggy door, then took the walkie talkies.
6. The villain climbed the rope ladder, then swiped the club mascot.
7. The villain climbed the rope ladder, then took the walkie talkies.
8. The villain zipped up the zipline, then took the walkie talkies.
9. The villain climbed the rope ladder, then snatched the golden juice box.
10. The villain scrambled up the oak tree, then took the walkie talkies.
11. The villain zipped up the zipline, then swiped the club mascot.
12. The villain zipped up the zipline, then snatched the golden juice box.

Answer Key

The Secret Treehouse Mystery

Culprit: Owen

Grappling Hook · Detective Coat · Left-handed · Brown Hair · Sneeze Powder

Trail: Start 21 → Clue 1 14 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT WEAR A WIG AND HAT"

Round 3,705 to the nearest hundred = 3700 (T) · Round 1,712 to the nearest hundred = 1700 (I) · Round 32 to the nearest ten = 30 (E) · Round 889 to the nearest hundred = 900 (O) · Round 173 to the nearest ten = 170 (W) · Round 4,334 to the nearest hundred = 4300 (G) · Round 2,759 to the nearest thousand = 3000 (N) · Round 48 to the nearest ten = 50 (R) · Round 303 to the nearest hundred = 300 (A) · Round 374 to the nearest ten = 370 (D) · Round 1,088 to the nearest hundred = 1100 (V) · Round 72 to the nearest ten = 70 (L) · Round 87 to the nearest ten = 90 (H) · Round 289 to the nearest ten = 290 (S)

Clue 2 (Addition): "THE SUSPECT USES THEIR LEFT HAND"

$3670 + 4170 = 7840$ (T) · $2096 + 3043 = 5139$ (H) · $1466 + 2409 = 3875$ (C) · $3244 + 5280 = 8524$ (N) · $1986 + 2684 = 4670$ (I) · $5402 + 2630 = 8032$ (U) · $2129 + 2611 = 4740$ (D) · $3999 + 4967 = 8966$ (E) · $6790 + 2976 = 9766$ (L) · $4121 + 3549 = 7670$ (S) · $2217 + 1540 = 3757$ (P) · $2761 + 4332 = 7093$ (F) · $4344 + 2139 = 6483$ (R) · $1520 + 2432 = 3952$ (A)

Clue 3 (Subtraction): "THE VILLAIN SNEEZES NEAR BLACK PEPPER"

$9718 - 4161 = 5557$ (T) · $6052 - 1381 = 4671$ (Z) · $7755 - 2911 = 4844$ (E) · $8445 - 2142 = 6303$ (K) · $9975 - 1976 = 7999$ (H) · $10374 - 3981 = 6393$ (B) · $13526 - 4675 = 8851$ (A) · $10564 - 1666 = 8898$ (S) · $2930 - 1873 = 1057$ (C) · $6231 - 539 = 5692$ (L) · $7492 - 1926 = 5566$ (V) · $11094 - 3397 = 7697$ (I) · $3985 - 1491 = 2494$ (R) · $4666 - 79 = 4587$ (P) · $3421 - 1819 = 1602$ (N)

Clue 4 (Multiplication facts (1-12)): "BROWN STRANDS OF HAIR WERE ON THE ROPE"

$11 \times 12 = 132$ (B) · $8 \times 4 = 32$ (W) · $3 \times 2 = 6$ (A) · $9 \times 12 = 108$ (F) · $1 \times 1 = 1$ (E) · $9 \times 8 = 72$ (I) · $9 \times 10 = 90$ (H) · $11 \times 2 = 22$ (P) · $7 \times 5 = 35$ (S) · $4 \times 11 = 44$ (T) · $6 \times 10 = 60$ (O) · $1 \times 11 = 11$ (N) · $6 \times 5 = 30$ (D) · $4 \times 10 = 40$ (R)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Owen

$10 \div 2 = 5$ · $45 \div 5 = 9$ · $88 \div 8 = 11$ · $80 \div 8 = 10$ · $56 \div 7 = 8$ · $77 \div 11 = 7$ · $12 \div 4 = 3$ · $36 \div 6 = 6$ · $40 \div 10 = 4$ · $84 \div 7 = 12$ · $12 \div 12 = 1$