



The Mystery of Pinecone Ridge

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

Detective: _____ Date: _____

Someone took the golden trail sign from Pinecone Ridge! Park Ranger Pat needs your help to examine trail clues, interview suspects, and figure out who snatched the sign.

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 trail bandit is _____

Possible suspects

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

NAME	GEAR ITEM	TRAIL SNACK	BELT CLIP	HAT STYLE	TRAIL FEAR
Jasper Ridge	Headlamp	Energy Bar	Left Belt Clip	Blue Sunhat	Fear of Mud
John Muir	Pocket Knife	Granola	Right Belt Clip	Green Visor	Fear of Heights
Ridge Walker	Telescope	Beef Jerky	Right Belt Clip	Blue Sunhat	Fear of Bees
Junko Tabei	Headlamp	Trail Mix	Left Belt Clip	Red Cap	Fear of Mud
Ranger Rick	Compass	Energy Bar	Right Belt Clip	Green Visor	Fear of Bees
Oakley Pine	Pocket Knife	Beef Jerky	Left Belt Clip	Blue Sunhat	Fear of Bees
Cliff Hanger	GPS Tracker	Granola	Left Belt Clip	Red Cap	Fear of Bees
Canyon Cruz	Compass	Granola	Right Belt Clip	Red Cap	Fear of Bees
Fern Valley	Headlamp	Energy Bar	Left Belt Clip	Green Visor	Fear of Bees
Tenzing Norgay	Pocket Knife	Energy Bar	Left Belt Clip	Blue Sunhat	Fear of Bees
Maya Forest	Headlamp	Dried Mango	Right Belt Clip	Blue Sunhat	Fear of Mud
Cheryl Strayed	GPS Tracker	Granola	Left Belt Clip	Blue Sunhat	Fear of Heights
Daisy Glen	Telescope	Energy Bar	Right Belt Clip	Red Cap	Fear of Mud
River Stone	GPS Tracker	Dried Mango	Left Belt Clip	Blue Sunhat	Fear of Bees
Sam Peak	Headlamp	Beef Jerky	Right Belt Clip	Blue Sunhat	Fear of Bees
Skye Summit	Headlamp	Beef Jerky	Left Belt Clip	Blue Sunhat	Fear of Bees
Sierra Woods	Pocket Knife	Granola	Left Belt Clip	Blue Sunhat	Fear of Mud
Edmund Hillary	GPS Tracker	Granola	Right Belt Clip	Blue Sunhat	Fear of Bees
Aron Ralston	Headlamp	Dried Mango	Left Belt Clip	Green Visor	Fear of Heights
Bear Grylls	Telescope	Beef Jerky	Left Belt Clip	Blue Sunhat	Fear of Bees
Alex Honnold	GPS Tracker	Beef Jerky	Right Belt Clip	Blue Sunhat	Fear of Mud

CLUE 1 Addition

Ranger Pat counts all the canteens collected along the path to unlock the first trail clue.

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

T 7639	7073	4610	T 7639	4243	8935	7300	6097	3577	8935	6557	5474	7300	T 7639	5474	3064	4610	4719
6557	3064	T 7639	4610	8935	T 7639	4610	6557	4610	4243	6128	3280	3577	8935	4243	4719		

$4433 + 3206 = \square \rightarrow \boxed{\text{T}}$	$2309 + 1268 = \square \rightarrow \boxed{\text{B}}$	$2038 + 2572 = \square \rightarrow \boxed{\text{E}}$
$2247 + 3227 = \square \rightarrow \boxed{\text{D}}$	$1902 + 4226 = \square \rightarrow \boxed{\text{G}}$	$3196 + 1523 = \square \rightarrow \boxed{\text{S}}$
$1096 + 2184 = \square \rightarrow \boxed{\text{Y}}$	$1909 + 4188 = \square \rightarrow \boxed{\text{L}}$	$5861 + 3074 = \square \rightarrow \boxed{\text{A}}$
$3741 + 3332 = \square \rightarrow \boxed{\text{H}}$	$4045 + 3255 = \square \rightarrow \boxed{\text{I}}$	$2794 + 1449 = \square \rightarrow \boxed{\text{R}}$
$2599 + 3958 = \square \rightarrow \boxed{\text{N}}$	$1197 + 1867 = \square \rightarrow \boxed{\text{O}}$	

Scratch space:

CLUE 2
Rounding

The ranger checks a digital altimeter that rounds elevation numbers to the nearest hundred.

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

A									A		A				
290	300	230	30	1300	9000	3700	3700	3700	290	300	290	20	9000	7000	30
														A	
170	9000	20	30	5000	20	230	1100	4300	1300	30	50	9000	30	900	290
														230	20

Round 287 to the nearest ten → **A**

Round 233 to the nearest ten → **I**

Round 337 to the nearest hundred → **W**

Round 1,096 to the nearest hundred → **P**

Round 169 to the nearest ten → **B**

Round 894 to the nearest hundred → **R**

Round 8,755 to the nearest thousand → **E**

Round 6,716 to the nearest thousand → **F**

Round 4,807 to the nearest thousand → **C**

Round 48 to the nearest ten → **H**

Round 1,296 to the nearest hundred → **N**

Round 3,659 to the nearest hundred → **S**

Round 24 to the nearest ten → **L**

Round 4,316 to the nearest hundred → **O**

Round 28 to the nearest ten → **T**

Scratch space:

CLUE 3
Subtraction

The detective calculates how many wooden trail markers are missing from the north loop.

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

T																			
4622	5543	4502	5453	2696	2817	4402	4502	5453	4502	8303	5186	2696	8278	4502	8840	2817	4502	2696	5453

2696	3367	4502	5453	1709	7472	2591	8303	1709	7472	4502	4502	5543	1292	3367	4502

$5355 - 733 = \square \rightarrow \text{**T**}$

$11627 - 3349 = \square \rightarrow \text{**P**}$

$2394 - 1102 = \square \rightarrow \text{**I**}$

$9376 - 1904 = \square \rightarrow \text{**B**}$

$4128 - 2419 = \square \rightarrow \text{**Y**}$

$8799 - 3256 = \square \rightarrow \text{**H**}$

$10581 - 1741 = \square \rightarrow \text{**D**}$

$9044 - 4542 = \square \rightarrow \text{**E**}$

$9697 - 1394 = \square \rightarrow \text{**S**}$

$7427 - 4060 = \square \rightarrow \text{**V**}$

$4587 - 1996 = \square \rightarrow \text{**U**}$

$3144 - 327 = \square \rightarrow \text{**N**}$

$3175 - 479 = \square \rightarrow \text{**A**}$

$7802 - 3400 = \square \rightarrow \text{**G**}$

$9391 - 3938 = \square \rightarrow \text{**R**}$

$6748 - 1562 = \square \rightarrow \text{**C**}$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The scouts inspect equal rows of supply tents at base camp to uncover evidence.

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

A									A					A		
132	25	15	21	55	11	21	32	81	132	99	99	81	1	55	132	16

	A										
120	132	11	144	32	99	81	55	15	144	77	

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

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

$5 \times 5 = \square \rightarrow \text{B}$

$5 \times 3 = \square \rightarrow \text{L}$

$12 \times 12 = \square \rightarrow \text{O}$

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

$5 \times 11 = \square \rightarrow \text{E}$

$8 \times 2 = \square \rightarrow \text{D}$

$7 \times 11 = \square \rightarrow \text{G}$

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

$7 \times 3 = \square \rightarrow \text{U}$

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

$12 \times 10 = \square \rightarrow \text{W}$

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

Scratch space:

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

The trail leader splits leftover water bottles equally among the hiking search teams.

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:

$42 \div 6 = \boxed{}$

$32 \div 8 = \boxed{}$

$56 \div 7 = \boxed{}$

$60 \div 10 = \boxed{}$

$70 \div 7 = \boxed{}$

$40 \div 8 = \boxed{}$

$6 \div 6 = \boxed{}$

$132 \div 11 = \boxed{}$

$18 \div 9 = \boxed{}$

$77 \div 7 = \boxed{}$

$63 \div 7 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain focused a small telescope, then snacking on dried mango.
2. The villain focused a small telescope, then munching on trail mix.
3. The villain focused a small telescope, then munching beef jerky.
4. The villain shined a bright headlamp, then munching beef jerky.
5. The villain shined a bright headlamp, then chewing crispy granola.
6. The villain unfolded a pocket knife, then eating an energy bar.
7. The villain checked a digital gps, then snacking on dried mango.
8. The villain unfolded a pocket knife, then munching beef jerky.
9. The villain focused a small telescope, then eating an energy bar.
10. The villain checked a digital gps, then chewing crispy granola.
11. The villain flashed a shiny compass, then munching beef jerky.
12. The villain flashed a shiny compass, then chewing crispy granola.

Answer Key

The Mystery of Pinecone Ridge

Culprit: Bear Grylls

Telescope · Beef Jerky · Left Belt Clip · Blue Sunhat · Fear of Bees

Trail: Start 21 → Clue 1 16 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE TRAIL BANDIT DOES NOT EAT ENERGY BARS"

$4433 + 3206 = 7639$ (T) · $2309 + 1268 = 3577$ (B) · $2038 + 2572 = 4610$ (E) · $2247 + 3227 = 5474$ (D) · $1902 + 4226 = 6128$ (G) · $3196 + 1523 = 4719$ (S) · $1096 + 2184 = 3280$ (Y) · $1909 + 4188 = 6097$ (L) · $5861 + 3074 = 8935$ (A) · $3741 + 3332 = 7073$ (H) · $4045 + 3255 = 7300$ (I) · $2794 + 1449 = 4243$ (R) · $2599 + 3958 = 6557$ (N) · $1197 + 1867 = 3064$ (O)

Clue 2 (Rounding): "A WITNESS SAW A LEFT BELT CLIP ON THE TRAIL"

Round 287 to the nearest ten = 290 (A) · Round 233 to the nearest ten = 230 (I) · Round 337 to the nearest hundred = 300 (W) · Round 1,096 to the nearest hundred = 1100 (P) · Round 169 to the nearest ten = 170 (B) · Round 894 to the nearest hundred = 900 (R) · Round 8,755 to the nearest thousand = 9000 (E) · Round 6,716 to the nearest thousand = 7000 (F) · Round 4,807 to the nearest thousand = 5000 (C) · Round 48 to the nearest ten = 50 (H) · Round 1,296 to the nearest hundred = 1300 (N) · Round 3,659 to the nearest hundred = 3700 (S) · Round 24 to the nearest ten = 20 (L) · Round 4,316 to the nearest hundred = 4300 (O) · Round 28 to the nearest ten = 30 (T)

Clue 3 (Subtraction): "THE RANGER ESCAPED NEAR A VERY BUSY BEEHIVE"

$5355 - 733 = 4622$ (T) · $11627 - 3349 = 8278$ (P) · $2394 - 1102 = 1292$ (I) · $9376 - 1904 = 7472$ (B) · $4128 - 2419 = 1709$ (Y) · $8799 - 3256 = 5543$ (H) · $10581 - 1741 = 8840$ (D) · $9044 - 4542 = 4502$ (E) · $9697 - 1394 = 8303$ (S) · $7427 - 4060 = 3367$ (V) · $4587 - 1996 = 2591$ (U) · $3144 - 327 = 2817$ (N) · $3175 - 479 = 2696$ (A) · $7802 - 3400 = 4402$ (G) · $9391 - 3938 = 5453$ (R) · $6748 - 1562 = 5186$ (C)

Clue 4 (Multiplication facts (1-12)): "A BLUE SUNHAT THREAD WAS ON THE LOG"

$12 \times 11 = 132$ (A) · $11 \times 1 = 11$ (S) · $5 \times 5 = 25$ (B) · $5 \times 3 = 15$ (L) · $12 \times 12 = 144$ (O) · $9 \times 9 = 81$ (H) · $5 \times 11 = 55$ (E) · $8 \times 2 = 16$ (D) · $7 \times 11 = 77$ (G) · $8 \times 4 = 32$ (N) · $7 \times 3 = 21$ (U) · $9 \times 11 = 99$ (T) · $12 \times 10 = 120$ (W) · $1 \times 1 = 1$ (R)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Bear Grylls

$42 \div 6 = 7$ · $32 \div 8 = 4$ · $56 \div 7 = 8$ · $60 \div 10 = 6$ · $70 \div 7 = 10$ · $40 \div 8 = 5$ · $6 \div 6 = 1$ · $132 \div 11 = 12$ · $18 \div 9 = 2$ · $77 \div 7 = 11$ · $63 \div 7 = 9$