The Mystery of Cloud Peak

Grade 4 math · Place value, Addition, Subtraction, Multi-step word problems, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

The golden compass of Pine Valley has gone missing from the ranger station. Someone sneaked into headquarters during the evening trail check. Solve the math clues to figure out who took the compass.

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 culprit is _____

Possible suspects

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

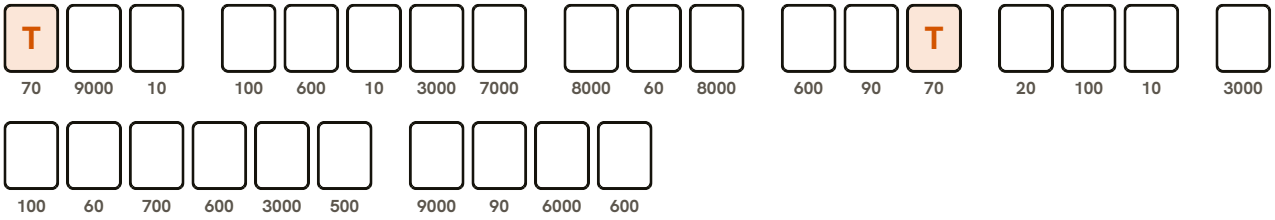
NAME	SPECIALIST GEAR	GADGET TOOL	DOMINANT HAND	HAIR STYLE	TRAIL WEAKNESS
Milo Branch	Glider Wings	Laser Pen	Right-handed	Braided hair	Whistle blast
Ian Summit	Glider Wings	Map Scanner	Right-handed	Curly hair	Compass spin
Cody Ridge	Glider Wings	Night Goggles	Left-handed	Braided hair	Flashlight shine
Julia Creek	Grappling Hook	Map Scanner	Left-handed	Curly hair	Whistle blast
Tina Valley	Flash Powder	Night Goggles	Right-handed	Spiky hair	Compass spin
Owen Field	Glider Wings	Map Scanner	Left-handed	Spiky hair	Compass spin
Wyatt Trail	Climbing Claws	Map Scanner	Left-handed	Curly hair	Compass spin
Ulysses Rock	Smoke Pellets	Signal Horn	Left-handed	Spiky hair	Compass spin
Bella Forest	Grappling Hook	Laser Pen	Left-handed	Spiky hair	Compass spin
Sam Timber	Grappling Hook	Map Scanner	Left-handed	Spiky hair	Compass spin
Zoe Grove	Glider Wings	Night Goggles	Right-handed	Curly hair	Compass spin
Alex River	Climbing Claws	Track Finder	Left-handed	Braided hair	Flashlight shine
Riley Peak	Glider Wings	Track Finder	Left-handed	Braided hair	Compass spin
Nora Cliff	Smoke Pellets	Track Finder	Right-handed	Curly hair	Whistle blast
Fiona Frost	Glider Wings	Night Goggles	Left-handed	Braided hair	Compass spin
Laura Meadow	Glider Wings	Laser Pen	Left-handed	Spiky hair	Whistle blast
Vera Stream	Grappling Hook	Signal Horn	Right-handed	Curly hair	Flashlight shine
Kevin Pines	Smoke Pellets	Laser Pen	Left-handed	Spiky hair	Compass spin
Ethan Birch	Flash Powder	Map Scanner	Left-handed	Curly hair	Compass spin
Hannah Lake	Climbing Claws	Signal Horn	Right-handed	Braided hair	Flashlight shine
Quinn Marsh	Grappling Hook	Track Finder	Left-handed	Curly hair	Flashlight shine

make your own at mathcrackers.com

CLUE 1 Place value

Ranger Rick inspected the electronic lock where place value digits revealed a clue about the thief.

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



What is the value of the 7 in 672? ☐ → T

What is the value of the 3 in 3,266? ☐ → A

What is the value of the 9 in 2,397? ☐ → O

What is the value of the 1 in 126? ☐ → S

What is the value of the 1 in 715? ☐ → E

What is the value of the 5 in 508? ☐ → L

What is the value of the 6 in 26,240? ☐ → R

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

What is the value of the 9 in 9,067? ☐ → H

What is the value of the 7 in 3,700? ☐ → G

What is the value of the 7 in 7,099? ☐ → K

What is the value of the 6 in 1,680? ☐ → N

What is the value of the 6 in 1,565? ☐ → I

What is the value of the 8 in 98,422? ☐ → D

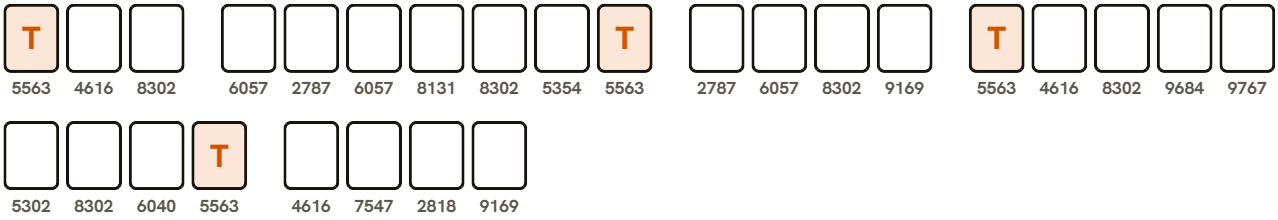
Scratch space:

CLUE 2

Addition

Ranger Rick added up all the tracks found near the supply shed to learn more.

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



1970 + 3593 = ☐ → T	3348 + 5821 = ☐ → D	2211 + 3846 = ☐ → S
5874 + 3893 = ☐ → R	3557 + 4574 = ☐ → P	3664 + 1638 = ☐ → L
1436 + 3180 = ☐ → H	2266 + 3774 = ☐ → F	1553 + 1234 = ☐ → U
3836 + 5848 = ☐ → I	2784 + 4763 = ☐ → A	1266 + 1552 = ☐ → N
3259 + 5043 = ☐ → E	2354 + 3000 = ☐ → C	

Scratch space:

CLUE 3 Subtraction

Ranger Rick subtracted the remaining supplies from total inventory to find a hidden detail.

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



5637 - 1503 = ☐ → **A**

9758 - 4114 = ☐ → **M**

12623 - 4198 = ☐ → **N**

6379 - 2531 = ☐ → **E**

8502 - 2743 = ☐ → **O**

8926 - 3613 = ☐ → **D**

2749 - 1119 = ☐ → **I**

3305 - 783 = ☐ → **F**

4186 - 630 = ☐ → **T**

6851 - 4236 = ☐ → **G**

4324 - 1346 = ☐ → **H**

8043 - 2610 = ☐ → **C**

5015 - 2932 = ☐ → **P**

10475 - 1825 = ☐ → **S**

12443 - 3940 = ☐ → **U**

Scratch space:

CLUE 4 Multi-step word problems

Ranger Rick solved a multi step puzzle about trail markers to unlock the next clue.

Solve each problem, then write its letter in the boxes to fill in the missing word.

A strand of

S								R
11	47	87	81	80	6	57	87	

hair turned up at the scene.

Ranger Rick collected 12 climbing ropes in the morning and 10 climbing ropes in the afternoon, then split them equally among 2 Pine Valley Explorers. How many climbing ropes did each get?

Answer: ☐ → **S**

There were 187 canteen cups in all. 16 canteen cups were set aside. The rest were shared equally among 3 Pine Valley Explorers. How many canteen cups did each get?

Answer: ☐ → **A**

Ranger Rick filled 5 boxes with 6 trail badges each, then found 17 more trail badges. How many trail badges are there in all?

Answer: ☐ → **P**

Ranger Rick collected 9 compasses in the morning and 27 compasses in the afternoon, then split them equally among 6 Pine Valley Explorers. How many compasses did each get?

Answer: ☐ → **H**

Ranger Rick collected 110 lantern bulbs in the morning and 210 lantern bulbs in the afternoon, then split them equally among 4 Pine Valley Explorers. How many lantern bulbs did each get?

Answer: ☐ → **Y**

Ranger Rick earned 4 trail badges in each of 6 rounds, plus 67 bonus trail badges. Then 4 trail badges were lost. How many trail badges are left?

Answer: ☐ → **I**

There were 671 lantern bulbs in all. 23 lantern bulbs were set aside. The rest were shared equally among 8 Pine Valley Explorers. How many lantern bulbs did each get?

Answer: ☐ → **K**

Scratch space:

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

> Ranger Rick divided the recovered camp tokens into equal groups to reveal the final lead.

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:

16 ÷ 8 = ☐	48 ÷ 6 = ☐	25 ÷ 5 = ☐	81 ÷ 9 = ☐	60 ÷ 10 = ☐
70 ÷ 10 = ☐	22 ÷ 2 = ☐	24 ÷ 6 = ☐	6 ÷ 2 = ☐	60 ÷ 6 = ☐
5 ÷ 5 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain vanished behind smoke pellets, then scanned the area with a map scanner.
2. The villain vanished behind smoke pellets, then cut the ropes with a laser pen.
3. The villain scaled the cliff with climbing claws, then alerted the team with a signal horn.
4. The villain vanished behind smoke pellets, then followed the path with a track finder.
5. The villain swung past using a grappling hook, then scanned the area with a map scanner.
6. The villain blinded the guard with flash powder, then scanned the area with a map scanner.
7. The villain blinded the guard with flash powder, then cut the ropes with a laser pen.
8. The villain swung past using a grappling hook, then cut the ropes with a laser pen.
9. The villain swung past using a grappling hook, then spotted the target using night goggles.
10. The villain soared down with glider wings, then followed the path with a track finder.
11. The villain swung past using a grappling hook, then alerted the team with a signal horn.
12. The villain soared down with glider wings, then scanned the area with a map scanner.

TEACHER / PARENT

Answer Key

The Mystery of Cloud Peak

Culprit: Owen Field

Glider Wings · Map Scanner · Left-handed · Spiky hair · Compass spin

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE SNEAK DID NOT USE A SIGNAL HORN"

What is the value of the 7 in 672? = 70 (T) · What is the value of the 3 in 3,266? = 3000 (A) · What is the value of the 9 in 2,397? = 90 (O) · What is the value of the 1 in 126? = 100 (S) · What is the value of the 1 in 715? = 10 (E) · What is the value of the 5 in 508? = 500 (L) · What is the value of the 6 in 26,240? = 6000 (R) · What is the value of the 2 in 420? = 20 (U) · What is the value of the 9 in 9,067? = 9000 (H) · What is the value of the 7 in 3,700? = 700 (G) · What is the value of the 7 in 7,099? = 7000 (K) · What is the value of the 6 in 1,680? = 600 (N) · What is the value of the 6 in 1,565? = 60 (I) · What is the value of the 8 in 98,422? = 8000 (D)

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

1970 + 3593 = 5563 (T) · 3348 + 5821 = 9169 (D) · 2211 + 3846 = 6057 (S) · 5874 + 3893 = 9767 (R) · 3557 + 4574 = 8131 (P) · 3664 + 1638 = 5302 (L) · 1436 + 3180 = 4616 (H) · 2266 + 3774 = 6040 (F) · 1553 + 1234 = 2787 (U) · 3836 + 5848 = 9684 (I) · 2784 + 4763 = 7547 (A) · 1266 + 1552 = 2818 (N) · 3259 + 5043 = 8302 (E) · 2354 + 3000 = 5354 (C)

Clue 3 (Subtraction): "A SPINNING COMPASS CONFUSED THEM"

5637 - 1503 = 4134 (A) · 9758 - 4114 = 5644 (M) · 12623 - 4198 = 8425 (N) · 6379 - 2531 = 3848 (E) · 8502 - 2743 = 5759 (O) · 8926 - 3613 = 5313 (D) · 2749 - 1119 = 1630 (I) · 3305 - 783 = 2522 (F) · 4186 - 630 = 3556 (T) · 6851 - 4236 = 2615 (G) · 4324 - 1346 = 2978 (H) · 8043 - 2610 = 5433 (C) · 5015 - 2932 = 2083 (P) · 10475 - 1825 = 8650 (S) · 12443 - 3940 = 8503 (U)

Clue 4 (Multi-step word problems): "SPIKY HAIR"

Ranger Rick collected 12 climbing ropes in the morning and 10 climbing ropes in the afternoon, then split them equally among 2 Pine Valley Explorers. How many climbing ropes did each get? = 11 (S) · There were 187 canteen cups in all. 16 canteen cups were set aside. The rest were shared equally among 3 Pine Valley Explorers. How many canteen cups did each get? = 57 (A) · Ranger Rick filled 5 boxes with 6 trail badges each, then found 17 more trail badges. How many trail badges are there in all? = 47 (P) · Ranger Rick collected 9 compasses in the morning and 27 compasses in the afternoon, then split them equally among 6 Pine Valley Explorers. How many compasses did each get? = 6 (H) · Ranger Rick collected 110 lantern bulbs in the morning and 210 lantern bulbs in the afternoon, then split them equally among 4 Pine Valley Explorers. How many lantern bulbs did each get? = 80 (Y) · Ranger Rick earned 4 trail badges in each of 6 rounds, plus 67 bonus trail badges. Then 4 trail badges were lost. How many trail badges are left? = 87 (I) · There were 671 lantern bulbs in all. 23 lantern bulbs were set aside. The rest were shared equally among 8 Pine Valley Explorers. How many lantern bulbs did each get? = 81 (K)

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

16 ÷ 8 = 2 · 48 ÷ 6 = 8 · 25 ÷ 5 = 5 · 81 ÷ 9 = 9 · 60 ÷ 10 = 6 · 70 ÷ 10 = 7 · 22 ÷ 2 = 11 · 24 ÷ 6 = 4 · 6 ÷ 2 = 3 · 60 ÷ 6 = 10 · 5 ÷ 5 = 1