Mystery of the Crystal Map

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

Detective: _____ **Date:** _____

Someone snuck into the camp tent and took the ancient crystal map! Use your math skills to narrow down the suspects and catch the thief.

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 Masked Marauder is _____

Possible suspects

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

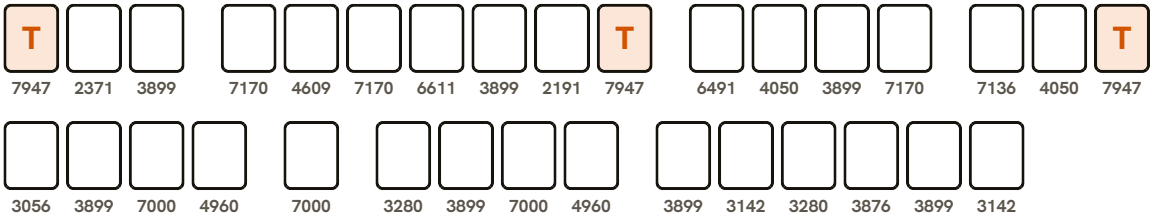
NAME	PRIMARY GEAR	BADGE EMBLEM	DOMINANT HAND	HAT COLOR	FEARED SOUND
Hunter Hank	Pocket Telescope	Wolf Emblem	Right-handed	Blue Cap	Bright Flash
Trooper Troy	Smoke Pellet	Bear Emblem	Left-handed	Blue Cap	Squeaky Toy
Navigator Ned	Smoke Pellet	Snake Emblem	Right-handed	Green Cap	Bright Flash
Chief Chris	Grappling Hook	Snake Emblem	Left-handed	Red Cap	Squeaky Toy
Rider Rose	Smoke Pellet	Tiger Emblem	Left-handed	Blue Cap	Loud Whistle
Skier Sean	Compass Watch	Bear Emblem	Left-handed	Green Cap	Squeaky Toy
Tracker Tom	Smoke Pellet	Tiger Emblem	Left-handed	Blue Cap	Bright Flash
Pathfinder Pete	Grappling Hook	Bear Emblem	Right-handed	Green Cap	Loud Whistle
Rover Ruby	Smoke Pellet	Wolf Emblem	Left-handed	Blue Cap	Loud Whistle
Sailor Sally	Pocket Telescope	Bear Emblem	Left-handed	Blue Cap	Loud Whistle
Guide Grace	Night Goggles	Falcon Emblem	Left-handed	Blue Cap	Squeaky Toy
Ranger Rick	Pocket Telescope	Tiger Emblem	Right-handed	Blue Cap	Squeaky Toy
Maya Swift	Pocket Telescope	Tiger Emblem	Right-handed	Blue Cap	Loud Whistle
Pilot Penny	Pocket Telescope	Falcon Emblem	Left-handed	Blue Cap	Squeaky Toy
Leo Bold	Grappling Hook	Snake Emblem	Left-handed	Blue Cap	Loud Whistle
Agent Andy	Night Goggles	Falcon Emblem	Left-handed	Red Cap	Loud Whistle
Explorer Elsa	Night Goggles	Snake Emblem	Left-handed	Blue Cap	Bright Flash
Captain Cole	Pocket Telescope	Tiger Emblem	Right-handed	Red Cap	Squeaky Toy
Trapper Tim	Compass Watch	Bear Emblem	Right-handed	Green Cap	Squeaky Toy
Climber Carl	Grappling Hook	Falcon Emblem	Left-handed	Blue Cap	Loud Whistle
Driver Daisy	Grappling Hook	Tiger Emblem	Left-handed	Red Cap	Bright Flash

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CLUE 1 Addition

We counted up all the tracks found near the supply tent to narrow down the emblem list.

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



2709 + 5238 = ☐ → T

1439 + 2460 = ☐ → E

2496 + 4115 = ☐ → P

3242 + 3894 = ☐ → N

4076 + 2924 = ☐ → A

4525 + 1966 = ☐ → D

680 + 1511 = ☐ → C

1085 + 1286 = ☐ → H

1024 + 2118 = ☐ → M

2054 + 2906 = ☐ → R

2372 + 1678 = ☐ → O

2732 + 1877 = ☐ → U

1227 + 1829 = ☐ → W

4760 + 2410 = ☐ → S

1507 + 2369 = ☐ → L

1434 + 1846 = ☐ → B

Scratch space:

CLUE 2 Subtraction

> Comparing the lost gear to what remains helped us figure out the thief's dominant hand.

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



6672 - 4069 = ☐ → T

7548 - 3579 = ☐ → A

8432 - 1309 = ☐ → I

5433 - 223 = ☐ → E

10558 - 4975 = ☐ → P

10979 - 3495 = ☐ → F

9679 - 4774 = ☐ → W

10208 - 3842 = ☐ → R

10863 - 2393 = ☐ → H

6373 - 27 = ☐ → S

9470 - 3460 = ☐ → O

5113 - 3339 = ☐ → N

6958 - 3625 = ☐ → D

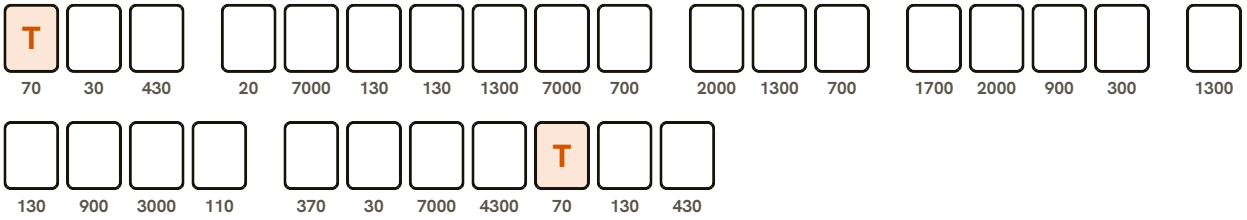
7042 - 2085 = ☐ → L

Scratch space:

CLUE 3 Rounding

The motion detector display rounded off the distance, giving us a quick hint about their gear.

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



Round 70 to the nearest ten ☐ → **T**

Round 4,287 to the nearest hundred ☐ → **S**

Round 2,588 to the nearest thousand ☐ → **U**

Round 109 to the nearest ten ☐ → **D**

Round 272 to the nearest hundred ☐ → **M**

Round 26 to the nearest ten ☐ → **H**

Round 372 to the nearest ten ☐ → **W**

Round 1,729 to the nearest hundred ☐ → **F**

Round 1,999 to the nearest thousand ☐ → **R**

Round 18 to the nearest ten ☐ → **V**

Round 7,487 to the nearest thousand ☐ → **I**

Round 686 to the nearest hundred ☐ → **N**

Round 911 to the nearest hundred ☐ → **O**

Round 1,345 to the nearest hundred ☐ → **A**

Round 429 to the nearest ten ☐ → **E**

Round 129 to the nearest ten ☐ → **L**

Scratch space:

CLUE 4 Word problems

Working out how many trail snacks were packed per scout revealed another key piece of evidence.

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

A strand of | B | | | | | | | hair turned up at the scene.

9	39	80	64	21	74	72

There were 47 rope coil. 38 were used up. How many rope coil are left?

Answer: ☐ → **B**

Trail guide lined up 8 rows of 10 compass. How many compass in all?

Answer: ☐ → **U**

Trail guide lined up 8 rows of 8 flashlight. How many flashlight in all?

Answer: ☐ → **E**

There were 52 rope coil. 13 were used up. How many rope coil are left?

Answer: ☐ → **L**

There were 108 flashlight. 36 were used up. How many flashlight are left?

Answer: ☐ → **P**

Trail guide found 53 canteen yesterday and 21 more today. How many canteen in all?

Answer: ☐ → **A**

Trail guide found 12 rope coil yesterday and 9 more today. How many rope coil in all?

Answer: ☐ → **C**

Scratch space:

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

> Dividing the clue cards equally among our team led us to the final detail about the hat color.

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 ÷ 5 = ☐ | 121 ÷ 11 = ☐ | 21 ÷ 3 = ☐ | 15 ÷ 5 = ☐ | 54 ÷ 9 = ☐

54 ÷ 6 = ☐ | 4 ÷ 4 = ☐ | 45 ÷ 9 = ☐ | 20 ÷ 5 = ☐ | 72 ÷ 9 = ☐

24 ÷ 12 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain checked the time with a compass watch, then pinned on a golden tiger emblem.
2. The villain scouted the dark trail with night goggles, then flashed a shiny falcon emblem.
3. The villain scouted the dark trail with night goggles, then polished a carved snake emblem.
4. The villain spotted the path using a pocket telescope, then showed off a silver wolf emblem.
5. The villain checked the time with a compass watch, then flashed a shiny falcon emblem.
6. The villain swung across the river with a grappling hook, then pinned on a golden tiger emblem.
7. The villain vanished into the trees with a smoke pellet, then pinned on a golden tiger emblem.
8. The villain vanished into the trees with a smoke pellet, then polished a carved snake emblem.
9. The villain spotted the path using a pocket telescope, then pinned on a golden tiger emblem.
10. The villain swung across the river with a grappling hook, then polished a carved snake emblem.
11. The villain vanished into the trees with a smoke pellet, then showed off a silver wolf emblem.
12. The villain swung across the river with a grappling hook, then flashed a shiny falcon emblem.

TEACHER / PARENT

Answer Key

Mystery of the Crystal Map

Culprit: Climber Carl

Grappling Hook · Falcon Emblem · Left-handed · Blue Cap · Loud Whistle

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE SUSPECT DOES NOT WEAR A BEAR EMBLEM"

2709 + 5238 = 7947 (T) · 1439 + 2460 = 3899 (E) · 2496 + 4115 = 6611 (P) · 3242 + 3894 = 7136 (N) · 4076 + 2924 = 7000 (A) · 4525 + 1966 = 6491 (D) · 680 + 1511 = 2191 (C) · 1085 + 1286 = 2371 (H) · 1024 + 2118 = 3142 (M) · 2054 + 2906 = 4960 (R) · 2372 + 1678 = 4050 (O) · 2732 + 1877 = 4609 (U) · 1227 + 1829 = 3056 (W) · 4760 + 2410 = 7170 (S) · 1507 + 2369 = 3876 (L) · 1434 + 1846 = 3280 (B)

Clue 2 (Subtraction): "THE FOOTPRINTS SHOW A LEFT HANDED STRIDE"

6672 - 4069 = 2603 (T) · 7548 - 3579 = 3969 (A) · 8432 - 1309 = 7123 (I) · 5433 - 223 = 5210 (E) · 10558 - 4975 = 5583 (P) · 10979 - 3495 = 7484 (F) · 9679 - 4774 = 4905 (W) · 10208 - 3842 = 6366 (R) · 10863 - 2393 = 8470 (H) · 6373 - 27 = 6346 (S) · 9470 - 3460 = 6010 (O) · 5113 - 3339 = 1774 (N) · 6958 - 3625 = 3333 (D) · 7042 - 2085 = 4957 (L)

Clue 3 (Rounding): "THE VILLAIN RAN FROM A LOUD WHISTLE"

Round 70 to the nearest ten = 70 (T) · Round 4,287 to the nearest hundred = 4300 (S) · Round 2,588 to the nearest thousand = 3000 (U) · Round 109 to the nearest ten = 110 (D) · Round 272 to the nearest hundred = 300 (M) · Round 26 to the nearest ten = 30 (H) · Round 372 to the nearest ten = 370 (W) · Round 1,729 to the nearest hundred = 1700 (F) · Round 1,999 to the nearest thousand = 2000 (R) · Round 18 to the nearest ten = 20 (V) · Round 7,487 to the nearest thousand = 7000 (I) · Round 686 to the nearest hundred = 700 (N) · Round 911 to the nearest hundred = 900 (O) · Round 1,345 to the nearest hundred = 1300 (A) · Round 429 to the nearest ten = 430 (E) · Round 129 to the nearest ten = 130 (L)

Clue 4 (Word problems): "BLUE CAP"

There were 47 rope coil. 38 were used up. How many rope coil are left? = 9 (B) · Trail guide lined up 8 rows of 10 compass. How many compass in all? = 80 (U) · Trail guide lined up 8 rows of 8 flashlight. How many flashlight in all? = 64 (E) · There were 52 rope coil. 13 were used up. How many rope coil are left? = 39 (L) · There were 108 flashlight. 36 were used up. How many flashlight are left? = 72 (P) · Trail guide found 53 canteen yesterday and 21 more today. How many canteen in all? = 74 (A) · Trail guide found 12 rope coil yesterday and 9 more today. How many rope coil in all? = 21 (C)

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

50 ÷ 5 = 10 · 121 ÷ 11 = 11 · 21 ÷ 3 = 7 · 15 ÷ 5 = 3 · 54 ÷ 9 = 6 · 54 ÷ 6 = 9 · 4 ÷ 4 = 1 · 45 ÷ 9 = 5 · 20 ÷ 5 = 4 · 72 ÷ 9 = 8 · 24 ÷ 12 = 2