The Mystery of the Missing Compass

Grade 7 math · Addition, Subtraction, Multiplication, Multi-step word problems, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone snuck into the camp tent and swapped the golden compass with a fake stone disc! Now the team needs your help to find out who did it.

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 rogue explorer is _____

Possible suspects

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

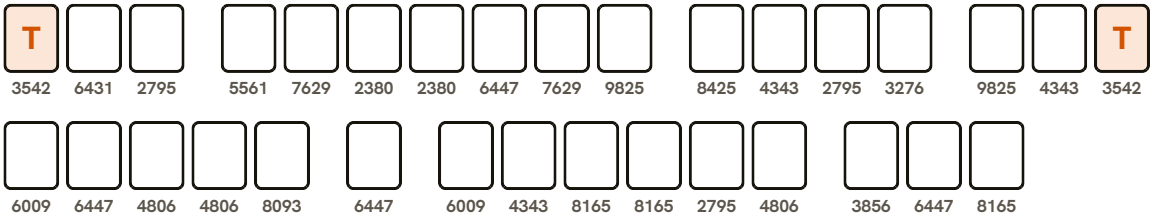
NAME	GEAR	TOOL	DOMINANT HAND	HAT STYLE	FEAR
Jett Ranger	smoke flare	copper map	right handed	leather cap	wild bees
Zoe Tracker	smoke flare	whistle	left handed	pith helmet	dark caves
Maya Explorer	signal torch	rope ladder	right handed	leather cap	wild bees
Ollie Ridge	smoke flare	leather journal	right handed	leather cap	loud thunder
Benny Woods	signal torch	leather journal	right handed	leather cap	wild bees
Rhea Summit	pocket glider	brass spyglass	left handed	woven visor	wild bees
Nia Trail	pocket glider	leather journal	right handed	pith helmet	wild bees
Milo Bark	smoke flare	leather journal	left handed	pith helmet	dark caves
Aria Frost	climbing axe	rope ladder	right handed	leather cap	loud thunder
Finn Horizon	pocket glider	brass spyglass	right handed	leather cap	wild bees
Tess Canyon	signal torch	copper map	right handed	leather cap	wild bees
Pinto Scout	climbing axe	brass spyglass	right handed	leather cap	wild bees
Mira Torch	grappling hook	leather journal	left handed	leather cap	loud thunder
Cleo Compass	grappling hook	brass spyglass	right handed	woven visor	loud thunder
Hugo Peak	climbing axe	whistle	left handed	leather cap	wild bees
Kobe Valley	grappling hook	copper map	left handed	leather cap	wild bees
Kira Stone	grappling hook	whistle	left handed	pith helmet	dark caves
Toby Coast	climbing axe	leather journal	right handed	pith helmet	wild bees
Lia Flint	pocket glider	brass spyglass	left handed	leather cap	loud thunder
Gabe Moss	smoke flare	whistle	right handed	woven visor	wild bees
Sena Marsh	smoke flare	rope ladder	right handed	leather cap	dark caves

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CLUE 1 Addition

To count all the gear crates brought ashore, the team added up the supply logs.

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



2274 + 1268 = ☐ → T	2409 + 1447 = ☐ → M	4877 + 3548 = ☐ → D
2609 + 1734 = ☐ → O	1537 + 1739 = ☐ → S	1762 + 1033 = ☐ → E
3768 + 1793 = ☐ → V	2706 + 2100 = ☐ → R	3287 + 4878 = ☐ → P
3342 + 4751 = ☐ → Y	3585 + 2862 = ☐ → A	1600 + 780 = ☐ → L
3385 + 4244 = ☐ → I	2894 + 3537 = ☐ → H	3399 + 2610 = ☐ → C
6489 + 3336 = ☐ → N		

Scratch space:

CLUE 2 Subtraction

> The camp tent was lighter after removing broken equipment from the main pack.

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



11181 - 4249 = ☐ → W

12555 - 3941 = ☐ → E

7249 - 4532 = ☐ → U

8527 - 632 = ☐ → H

5124 - 357 = ☐ → C

2714 - 1665 = ☐ → D

2634 - 620 = ☐ → N

12870 - 4448 = ☐ → K

8840 - 4713 = ☐ → R

7275 - 4971 = ☐ → A

8580 - 4511 = ☐ → G

11777 - 3520 = ☐ → M

3418 - 1800 = ☐ → S

9567 - 3923 = ☐ → O

6944 - 4245 = ☐ → T

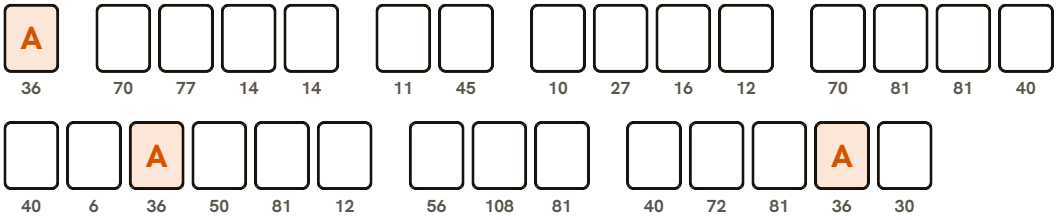
5681 - 3315 = ☐ → I

Scratch space:

CLUE 3 Multiplication facts (1-12)

> The scouts arranged their tents in equal rows across the jungle camp.

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



3 × 12 = ☐ → A	9 × 9 = ☐ → E	4 × 10 = ☐ → S	
2 × 8 = ☐ → L	2 × 5 = ☐ → W	1 × 11 = ☐ → O	3 × 4 = ☐ → D
10 × 7 = ☐ → B	10 × 3 = ☐ → K	10 × 5 = ☐ → R	
9 × 5 = ☐ → F	9 × 12 = ☐ → H	1 × 6 = ☐ → C	7 × 8 = ☐ → T
9 × 3 = ☐ → I	7 × 11 = ☐ → U	7 × 2 = ☐ → Z	
6 × 12 = ☐ → N			

Scratch space:

CLUE 4 Multi-step word problems

The lead guide calculated how many food packs were left after three days of hiking and trading.

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

A strand of

L									P
76	63	44	66	22	63	29	61	44	

hair turned up at the scene.

Ranger filled 3 boxes with 3 ancient maps each, then found 67 more ancient maps. How many ancient maps are there in all?

Answer: ☐ → L

Ranger collected 64 ancient maps in the morning and 24 ancient maps in the afternoon, then split them equally among 2 Expedition League. How many ancient maps did each get?

Answer: ☐ → A

There were 188 bronze compasses in all. 2 Expedition League used 33 bronze compasses each. The other 2 Expedition League shared the rest equally. How many bronze compasses did each of the other Expedition League get?

Answer: ☐ → C

There were 298 golden coins in all. 4 Expedition League used 31 golden coins each. The other 6 Expedition League shared the rest equally. How many golden coins did each of the other Expedition League get?

Answer: ☐ → R

Ranger earned 5 carved statues in each of 2 rounds, plus 57 bonus carved statues. Then 4 carved statues were lost. How many carved statues are left?

Answer: ☐ → E

There were 690 golden coins in all. 30 golden coins were set aside. The rest were shared equally among 10 Expedition League. How many golden coins did each get?

Answer: ☐ → T

Ranger earned 5 carved statues in each of 2 rounds, plus 22 bonus carved statues. Then 10 carved statues were lost. How many carved statues are left?

Answer: ☐ → H

Scratch space:

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

> The explorers divided the drinking water equally among all the hiking groups.

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:

132 ÷ 12 = ☐ | 63 ÷ 9 = ☐ | 11 ÷ 11 = ☐ | 24 ÷ 8 = ☐ | 32 ÷ 4 = ☐

32 ÷ 8 = ☐ | 18 ÷ 9 = ☐ | 42 ÷ 7 = ☐ | 48 ÷ 4 = ☐ | 90 ÷ 10 = ☐

5 ÷ 1 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain lit the path with a signal torch, then dropped down using a rope ladder.
2. The villain lit the path with a signal torch, then spotted the camp through a brass spyglass.
3. The villain glided down with a pocket glider, then dropped down using a rope ladder.
4. The villain threw a smoke flare to escape, then spotted the camp through a brass spyglass.
5. The villain used a grappling hook to climb the wall, then blew a signal on a whistle.
6. The villain threw a smoke flare to escape, then checked directions on a copper map.
7. The villain lit the path with a signal torch, then wrote notes in a leather journal.
8. The villain swung across with a climbing axe, then wrote notes in a leather journal.
9. The villain used a grappling hook to climb the wall, then spotted the camp through a brass spyglass.
10. The villain glided down with a pocket glider, then spotted the camp through a brass spyglass.
11. The villain swung across with a climbing axe, then spotted the camp through a brass spyglass.
12. The villain swung across with a climbing axe, then checked directions on a copper map.

TEACHER / PARENT

Answer Key

The Mystery of the Missing Compass

Culprit: Finn Horizon

pocket glider · brass spyglass · right handed · leather cap · wild bees

Trail: Start 21 → Clue 1 18 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE VILLAIN DOES NOT CARRY A COPPER MAP"

2274 + 1268 = 3542 (T) · 2409 + 1447 = 3856 (M) · 4877 + 3548 = 8425 (D) · 2609 + 1734 = 4343 (O) · 1537 + 1739 = 3276 (S) · 1762 + 1033 = 2795 (E) · 3768 + 1793 = 5561 (V) · 2706 + 2100 = 4806 (R) · 3287 + 4878 = 8165 (P) · 3342 + 4751 = 8093 (Y) · 3585 + 2862 = 6447 (A) · 1600 + 780 = 2380 (L) · 3385 + 4244 = 7629 (I) · 2894 + 3537 = 6431 (H) · 3399 + 2610 = 6009 (C) · 6489 + 3336 = 9825 (N)

Clue 2 (Subtraction): "WITNESS SAW A RIGHT HANDED TRACK ON THE MUD"

11181 - 4249 = 6932 (W) · 12555 - 3941 = 8614 (E) · 7249 - 4532 = 2717 (U) · 8527 - 632 = 7895 (H) · 5124 - 357 = 4767 (C) · 2714 - 1665 = 1049 (D) · 2634 - 620 = 2014 (N) · 12870 - 4448 = 8422 (K) · 8840 - 4713 = 4127 (R) · 7275 - 4971 = 2304 (A) · 8580 - 4511 = 4069 (G) · 11777 - 3520 = 8257 (M) · 3418 - 1800 = 1618 (S) · 9567 - 3923 = 5644 (O) · 6944 - 4245 = 2699 (T) · 5681 - 3315 = 2366 (I)

Clue 3 (Multiplication facts (1-12)): "A BUZZ OF WILD BEES SCARED THE SNEAK"

3 × 12 = 36 (A) · 9 × 9 = 81 (E) · 4 × 10 = 40 (S) · 2 × 8 = 16 (L) · 2 × 5 = 10 (W) · 1 × 11 = 11 (O) · 3 × 4 = 12 (D) · 10 × 7 = 70 (B) · 10 × 3 = 30 (K) · 10 × 5 = 50 (R) · 9 × 5 = 45 (F) · 9 × 12 = 108 (H) · 1 × 6 = 6 (C) · 7 × 8 = 56 (T) · 9 × 3 = 27 (I) · 7 × 11 = 77 (U) · 7 × 2 = 14 (Z) · 6 × 12 = 72 (N)

Clue 4 (Multi-step word problems): "LEATHER CAP"

Ranger filled 3 boxes with 3 ancient maps each, then found 67 more ancient maps. How many ancient maps are there in all? = 76 (L) · Ranger collected 64 ancient maps in the morning and 24 ancient maps in the afternoon, then split them equally among 2 Expedition League. How many ancient maps did each get? = 44 (A) · There were 188 bronze compasses in all. 2 Expedition League used 33 bronze compasses each. The other 2 Expedition League shared the rest equally. How many bronze compasses did each of the other Expedition League get? = 61 (C) · There were 298 golden coins in all. 4 Expedition League used 31 golden coins each. The other 6 Expedition League shared the rest equally. How many golden coins did each of the other Expedition League get? = 29 (R) · Ranger earned 5 carved statues in each of 2 rounds, plus 57 bonus carved statues. Then 4 carved statues were lost. How many carved statues are left? = 63 (E) · There were 690 golden coins in all. 30 golden coins were set aside. The rest were shared equally among 10 Expedition League. How many golden coins did each get? = 66 (T) · Ranger earned 5 carved statues in each of 2 rounds, plus 22 bonus carved statues. Then 10 carved statues were lost. How many carved statues are left? = 22 (H)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Finn Horizon

132 ÷ 12 = 11 · 63 ÷ 9 = 7 · 11 ÷ 11 = 1 · 24 ÷ 8 = 3 · 32 ÷ 4 = 8 · 32 ÷ 8 = 4 · 18 ÷ 9 = 2 · 42 ÷ 7 = 6 · 48 ÷ 4 = 12 · 90 ÷ 10 = 9 · 5 ÷ 1 = 5