



The Lost Compass Mystery

Grade 3 math · Place value, Addition, Subtraction, Rounding, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone snuck into the camp tent and took the golden compass! Work through the clues around the ruins to 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 bandit is _____

Possible suspects

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

NAME	TOOL	GEAR	DOMINANT HAND	HEADWEAR	WEAKNESS
Henry Drake	CAMP COMPASS	STEEL CROWBAR	RIGHT HANDED	BRIGHT HELMET	LOUD WHISTLE
Ruby Diaz	GRAPPLING HOOK	STEEL CROWBAR	RIGHT HANDED	BLACK HAT	LOUD WHISTLE
Zoe Adams	TORCH LIGHT	CLIMBING SPIKES	LEFT HANDED	RED BANDANA	LOUD WHISTLE
Jack Sterling	GRAPPLING HOOK	GLIDER WINGS	LEFT HANDED	BRIGHT HELMET	LOUD WHISTLE
Eli Vance	GRAPPLING HOOK	STEEL CROWBAR	RIGHT HANDED	RED BANDANA	NET TRAP
Ivy Morgan	CAMP COMPASS	ROPE LADDER	LEFT HANDED	BRIGHT HELMET	LOUD WHISTLE
Luke Harper	TORCH LIGHT	GLIDER WINGS	RIGHT HANDED	RED BANDANA	LOUD WHISTLE
Ella Vance	MAP SCROLL	ROPE LADDER	LEFT HANDED	BLACK HAT	NET TRAP
Ava Brooks	MAP SCROLL	STEEL CROWBAR	RIGHT HANDED	RED BANDANA	FLASH LIGHT
Toby Walsh	GRAPPLING HOOK	STEEL CROWBAR	LEFT HANDED	BLACK HAT	NET TRAP
Caleb Ross	GRAPPLING HOOK	POCKET TELESCOPE	RIGHT HANDED	BLACK HAT	NET TRAP
Owen Hayes	TORCH LIGHT	STEEL CROWBAR	LEFT HANDED	BLACK HAT	LOUD WHISTLE
Chloe Bennett	SMOKE BOMB	GLIDER WINGS	RIGHT HANDED	BRIGHT HELMET	NET TRAP
Sophia Bell	GRAPPLING HOOK	CLIMBING SPIKES	RIGHT HANDED	RED BANDANA	LOUD WHISTLE
Finn Connor	GRAPPLING HOOK	STEEL CROWBAR	LEFT HANDED	BRIGHT HELMET	NET TRAP
Grace Kim	GRAPPLING HOOK	GLIDER WINGS	LEFT HANDED	BLACK HAT	NET TRAP
Maya Santos	GRAPPLING HOOK	ROPE LADDER	LEFT HANDED	BLACK HAT	NET TRAP
Leo Rivera	TORCH LIGHT	GLIDER WINGS	LEFT HANDED	RED BANDANA	NET TRAP
Mason Cole	CAMP COMPASS	STEEL CROWBAR	LEFT HANDED	BLACK HAT	NET TRAP
Sam Patel	GRAPPLING HOOK	POCKET TELESCOPE	RIGHT HANDED	RED BANDANA	LOUD WHISTLE
Lily Price	TORCH LIGHT	STEEL CROWBAR	LEFT HANDED	BLACK HAT	NET TRAP

CLUE 1



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

Diagram illustrating a number system with two rows of boxes. The top row contains 15 boxes, and the bottom row contains 15 boxes. The first and last boxes in both rows are orange and labeled 'T'. The other boxes are white. Below each box is a numerical value.

Row	Box 1 (T)	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 (T)		
Top	5000	400	100	80	700	40	40	8000	700	800	90	4000	100	10	800	4000	5000
Bottom	1000	10	100	8000	2000	4000	6000	100	40	8000	90	90	100	2000			

10

1

10

V

10

N

1

1

1

7

1

1

7

1

?

R

10

?

A

Scratch space:

CLUE 2 Addition

You combine the supply totals recorded in the explorer notebook.

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

T									T						T
258	463	524	411	556	411	614	524	684	258	581	411	298	524	552	258

463	814	959	668	524	668

$90 + 168 = \div \rightarrow \div T$

$664 + 295 = \div \rightarrow \div N$

$334 + 222 = \div \rightarrow \div U$

$252 + 432 = \div \rightarrow \div C$

$184 + 114 = \div \rightarrow \div L$

$367 + 157 = \div \rightarrow \div E$

$126 + 285 = \div \rightarrow \div S$

$266 + 402 = \div \rightarrow \div D$

$357 + 257 = \div \rightarrow \div P$

$369 + 183 = \div \rightarrow \div F$

$349 + 465 = \div \rightarrow \div A$

$218 + 245 = \div \rightarrow \div H$

$182 + 399 = \div \rightarrow \div I$

Scratch space:

CLUE 3

Subtraction

You figure out how many tools are missing by subtracting what remains.

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

T																T		
577	705	429	716	498	214	214	432	498	157	498	325	117	429	432	285	577	309	432

		T	T			
157	429	577	577	322	432	436

$777 - 200 = \square \rightarrow \text{[T]}$

$1094 - 389 = \square \rightarrow \text{[H]}$

$427 - 213 = \square \rightarrow \text{[L]}$

$796 - 360 = \square \rightarrow \text{[P]}$

$1038 - 322 = \square \rightarrow \text{[V]}$

$322 - 165 = \square \rightarrow \text{[N]}$

$556 - 231 = \square \rightarrow \text{[S]}$

$434 - 317 = \square \rightarrow \text{[W]}$

$351 - 66 = \square \rightarrow \text{[K]}$

$650 - 218 = \square \rightarrow \text{[A]}$

$772 - 274 = \square \rightarrow \text{[I]}$

$642 - 213 = \square \rightarrow \text{[E]}$

$365 - 56 = \square \rightarrow \text{[O]}$

$686 - 364 = \square \rightarrow \text{[R]}$

Scratch space:

CLUE 4

Rounding

The radio display only shows rounded numbers for the distance to camp.

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

A			A				A			A						A	
800	90	500	800	50	900	40	800	4000	2000	800	9000	500	400	80	4000	800	4000
4000	40	400	9000	50	400	3000	400										

Round 809 to the nearest hundred → **A**

Round 3,043 to the nearest thousand → **N**

Round 368 to the nearest hundred → **E**

Round 9,363 to the nearest thousand → **S**

Round 78 to the nearest ten → **F**

Round 36 to the nearest ten → **H**

Round 459 to the nearest hundred → **L**

Round 93 to the nearest ten → **B**

Round 2,393 to the nearest thousand → **W**

Round 51 to the nearest ten → **C**

Round 886 to the nearest hundred → **K**

Round 4,376 to the nearest thousand → **T**

Scratch space:

CLUE 5**Missing addends - the last clue**

You solve the missing inventory numbers to find the final secret code.

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:

$1 + \underline{\quad} = 8$

$4 + \underline{\quad} = 6$

$7 + \underline{\quad} = 12$

$7 + \underline{\quad} = 8$

$9 + \underline{\quad} = 15$

$2 + \underline{\quad} = 6$

$7 + \underline{\quad} = 16$

$1 + \underline{\quad} = 11$

$4 + \underline{\quad} = 16$

$2 + \underline{\quad} = 13$

$8 + \underline{\quad} = 11$

Step 2 - cross out the sentence with each answer:

1. The villain vanished using a smoke bomb, then pried open the lock with a steel crowbar.
2. The villain guided the way with a camp compass, then pried open the lock with a steel crowbar.
3. The villain checked the route on a map scroll, then scaled the cliff with climbing spikes.
4. The villain lit up the trail with a torch light, then scouted ahead with a pocket telescope.
5. The villain lit up the trail with a torch light, then pried open the lock with a steel crowbar.
6. The villain vanished using a smoke bomb, then escaped on glider wings.
7. The villain swung in with a grappling hook, then pried open the lock with a steel crowbar.
8. The villain swung in with a grappling hook, then escaped on glider wings.
9. The villain checked the route on a map scroll, then climbed down with a rope ladder.
10. The villain swung in with a grappling hook, then scaled the cliff with climbing spikes.
11. The villain checked the route on a map scroll, then scouted ahead with a pocket telescope.
12. The villain vanished using a smoke bomb, then scaled the cliff with climbing spikes.

Answer Key

The Lost Compass Mystery

Culprit: Grace Kim

GRAPPLING HOOK · GLIDER WINGS · LEFT HANDED · BLACK HAT · NET TRAP

Trail: Start 21 → Clue 1 18 → Clue 2 9 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE VILLAIN DOES NOT USE A ROPE LADDER"

What is the value of the 5 in 95,698? = 5000 (T) · What is the value of the 8 in 283? = 80 (V) · What is the value of the 1 in 71,245? = 1000 (U) · What is the value of the 8 in 809? = 800 (N) · What is the value of the 4 in 4,913? = 4000 (O) · What is the value of the 7 in 1,702? = 700 (I) · What is the value of the 1 in 6,160? = 100 (E) · What is the value of the 4 in 246? = 40 (L) · What is the value of the 9 in 797? = 90 (D) · What is the value of the 4 in 6,475? = 400 (H) · What is the value of the 6 in 26,574? = 6000 (P) · What is the value of the 2 in 2,450? = 2000 (R) · What is the value of the 1 in 5,510? = 10 (S) · What is the value of the 8 in 38,159? = 8000 (A)

Clue 2 (Addition): "THE SUSPECT IS LEFT HANDED"

$90 + 168 = 258$ (T) · $664 + 295 = 959$ (N) · $334 + 222 = 556$ (U) · $252 + 432 = 684$ (C) · $184 + 114 = 298$ (L) · $367 + 157 = 524$ (E) · $126 + 285 = 411$ (S) · $266 + 402 = 668$ (D) · $357 + 257 = 614$ (P) · $369 + 183 = 552$ (F) · $349 + 465 = 814$ (A) · $218 + 245 = 463$ (H) · $182 + 399 = 581$ (I)

Clue 3 (Subtraction): "THE VILLAIN IS WEAK TO A NET TRAP"

$777 - 200 = 577$ (T) · $1094 - 389 = 705$ (H) · $427 - 213 = 214$ (L) · $796 - 360 = 436$ (P) · $1038 - 322 = 716$ (V) · $322 - 165 = 157$ (N) · $556 - 231 = 325$ (S) · $434 - 317 = 117$ (W) · $351 - 66 = 285$ (K) · $650 - 218 = 432$ (A) · $772 - 274 = 498$ (I) · $642 - 213 = 429$ (E) · $365 - 56 = 309$ (O) · $686 - 364 = 322$ (R)

Clue 4 (Rounding): "A BLACK HAT WAS LEFT AT THE SCENE"

Round 809 to the nearest hundred = 800 (A) · Round 3,043 to the nearest thousand = 3000 (N) · Round 368 to the nearest hundred = 400 (E) · Round 9,363 to the nearest thousand = 9000 (S) · Round 78 to the nearest ten = 80 (F) · Round 36 to the nearest ten = 40 (H) · Round 459 to the nearest hundred = 500 (L) · Round 93 to the nearest ten = 90 (B) · Round 2,393 to the nearest thousand = 2000 (W) · Round 51 to the nearest ten = 50 (C) · Round 886 to the nearest hundred = 900 (K) · Round 4,376 to the nearest thousand = 4000 (T)

Clue 5 (Missing addends): surviving statement is box 8 → Grace Kim

$1 + \underline{\quad} = 8 = 7$ · $4 + \underline{\quad} = 6 = 2$ · $7 + \underline{\quad} = 12 = 5$ · $7 + \underline{\quad} = 8 = 1$ · $9 + \underline{\quad} = 15 = 6$ · $2 + \underline{\quad} = 6 = 4$ · $7 + \underline{\quad} = 16 = 9$ · $1 + \underline{\quad} = 11 = 10$ · $4 + \underline{\quad} = 16 = 12$ · $2 + \underline{\quad} = 13 = 11$ · $8 + \underline{\quad} = 11 = 3$