



The Lost Compass Mystery

Grade 4 math · Multiplication, Multi-step word problems, Rounding, Addition, Missing addends · Reading level grades 3-4

Detective: _____ Date: _____

Someone swiped Ranger Rita's Golden Compass right off her camp desk! Check the clues to catch the sneaky rival explorer before they sail away with the island treasure.

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 Rival Explorer is _____

Possible suspects

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

NAME	MAIN TOOL	GEAR BAG	STANCE	HAT COLOR	FEAR
Leo	Grappling Hook	Canvas Tents	Right Handed	Red Bandana	Prickly Bushes
Nellie	Brass Telescope	Rescue Flares	Left Handed	Brown Fedora	Muddy Swamps
Indiana	Signal Lantern	Rescue Flares	Left Handed	Brown Fedora	Prickly Bushes
Dora	Rope Ladder	Canteen Pack	Right Handed	Brown Fedora	Muddy Swamps
Annie	Rope Ladder	Canvas Tents	Right Handed	Green Cap	Screeching Bats
Cleo	Rope Ladder	Canteen Pack	Left Handed	Brown Fedora	Screeching Bats
Maya	Brass Telescope	Canteen Pack	Left Handed	Green Cap	Muddy Swamps
Marco	Brass Telescope	Canteen Pack	Left Handed	Brown Fedora	Muddy Swamps
Penny	Signal Lantern	Canteen Pack	Right Handed	Green Cap	Muddy Swamps
Jack	Machete Tool	Supply Sack	Left Handed	Brown Fedora	Muddy Swamps
Vasco	Rope Ladder	Canvas Tents	Left Handed	Brown Fedora	Muddy Swamps
Tenzing	Signal Lantern	Supply Sack	Right Handed	Brown Fedora	Muddy Swamps
Lara	Machete Tool	Canteen Pack	Left Handed	Brown Fedora	Muddy Swamps
Edmund	Machete Tool	Canteen Pack	Right Handed	Green Cap	Screeching Bats
Amelia	Machete Tool	Canteen Pack	Left Handed	Brown Fedora	Prickly Bushes
Brody	Rope Ladder	Supply Sack	Left Handed	Green Cap	Screeching Bats
Meriwether	Machete Tool	Rescue Flares	Right Handed	Red Bandana	Muddy Swamps
Diego	Rope Ladder	Canvas Tents	Right Handed	Red Bandana	Muddy Swamps
Finn	Machete Tool	Supply Sack	Right Handed	Brown Fedora	Muddy Swamps
Sam	Grappling Hook	Rescue Flares	Left Handed	Red Bandana	Muddy Swamps
Roald	Rope Ladder	Rescue Flares	Left Handed	Brown Fedora	Screeching Bats

CLUE 1

Multiplication facts (1-12)

Ranger Rita counted equal rows of supply crates stacked at base camp.

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

T																T
72	15	81	21	77	66	66	33	77	70	25	55	81	120	70	55	72

											T			T	
9	33	84	84	36	9	33	70	21	33	120	72	81	70	72	120

$12 \times 6 = \square \rightarrow \boxed{\text{T}}$

$7 \times 10 = \square \rightarrow \boxed{\text{N}}$

$9 \times 1 = \square \rightarrow \boxed{\text{C}}$

$6 \times 11 = \square \rightarrow \boxed{\text{L}}$

$5 \times 11 = \square \rightarrow \boxed{\text{O}}$

$7 \times 11 = \square \rightarrow \boxed{\text{I}}$

$11 \times 3 = \square \rightarrow \boxed{\text{A}}$

$9 \times 9 = \square \rightarrow \boxed{\text{E}}$

$5 \times 5 = \square \rightarrow \boxed{\text{D}}$

$5 \times 3 = \square \rightarrow \boxed{\text{H}}$

$7 \times 3 = \square \rightarrow \boxed{\text{V}}$

$7 \times 12 = \square \rightarrow \boxed{\text{R}}$

$12 \times 10 = \square \rightarrow \boxed{\text{S}}$

$6 \times 6 = \square \rightarrow \boxed{\text{Y}}$

Scratch space:

CLUE 2

Multi-step word problems

The trail scout tracked camp spending after buying supplies and getting change.

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

A witness saw the villain was L D D .

13 30 69 58 35 28 49 30

Scout collected 15 compasses in the morning and 37 compasses in the afternoon, then split them equally among 4 Explorers. How many compasses did each get?

Answer: → L

There were 250 flashlight batteries in all. 18 flashlight batteries were set aside. The rest were shared equally among 4 Explorers. How many flashlight batteries did each get?

Answer: → T

There were 291 flashlight batteries in all. 4 Explorers used 36 flashlight batteries each. The other 3 Explorers shared the rest equally. How many flashlight batteries did each of the other Explorers get?

Answer: → N

There were 342 flashlight batteries in all. 3 Explorers used 22 flashlight batteries each. The other 4 Explorers shared the rest equally. How many flashlight batteries did each of the other Explorers get?

Answer: → F

There were 152 canteen cups in all. 4 Explorers used 10 canteen cups each. The other 4 Explorers shared the rest equally. How many canteen cups did each of the other Explorers get?

Answer: → A

Scout collected 14 canteen cups in the morning and 136 canteen cups in the afternoon, then split them equally among 5 Explorers. How many canteen cups did each get?

Answer: → E

There were 363 compasses in all. 13 compasses were set aside. The rest were shared equally among 10 Explorers. How many compasses did each get?

Answer: → H

Scratch space:

CLUE 3

Rounding

The scout radio screen only showed rounded altitude numbers.

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

T																		
70	30	200	20	500	200	1300	3000	20	70	900	9000	3700	110	200	170	2900	500	
9000	900	170	170	130	20	430	1300	9000	1100	20								

Round 71 to the nearest ten → **T**

Round 1,144 to the nearest hundred → **P**

Round 29 to the nearest ten → **H**

Round 8,539 to the nearest thousand → **M**

Round 3,669 to the nearest hundred → **B**

Round 191 to the nearest hundred → **E**

Round 108 to the nearest ten → **L**

Round 167 to the nearest ten → **D**

Round 1,301 to the nearest hundred → **A**

Round 17 to the nearest ten → **S**

Round 133 to the nearest ten → **Y**

Round 2,914 to the nearest hundred → **I**

Round 915 to the nearest hundred → **U**

Round 2,836 to the nearest thousand → **K**

Round 429 to the nearest ten → **W**

Round 452 to the nearest hundred → **N**

Scratch space:

CLUE 4 Addition

The team tallied all the gold coins gathered along the shore.

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

A 6504	4243	6063	6948	A 6504	8379	5232	2298	7204	7204	5232	6948	8303	5299	A 6504
8730	6948	8303	8259	9197	5232	2298	6686	8303	6948	A 6504				

$2018 + 4486 = \square \rightarrow \text{A}$	$5878 + 2852 = \square \rightarrow \text{B}$	$3763 + 4616 = \square \rightarrow \text{P}$
$2649 + 2650 = \square \rightarrow \text{M}$	$2657 + 5602 = \square \rightarrow \text{W}$	$2591 + 4357 = \square \rightarrow \text{R}$
$894 + 1404 = \square \rightarrow \text{E}$	$3433 + 3253 = \square \rightarrow \text{D}$	$3050 + 3013 = \square \rightarrow \text{T}$
$1416 + 2827 = \square \rightarrow \text{S}$	$4241 + 4956 = \square \rightarrow \text{N}$	$3456 + 3748 = \square \rightarrow \text{L}$
$5311 + 2992 = \square \rightarrow \text{O}$	$2340 + 2892 = \square \rightarrow \text{F}$	

Scratch space:

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

Some map pieces were missing from the complete trail map.

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:

$22 + \underline{\quad} = 30$

$16 + \underline{\quad} = 27$

$10 + \underline{\quad} = 19$

$25 + \underline{\quad} = 31$

$11 + \underline{\quad} = 14$

$20 + \underline{\quad} = 30$

$5 + \underline{\quad} = 7$

$3 + \underline{\quad} = 7$

$32 + \underline{\quad} = 44$

$27 + \underline{\quad} = 28$

$17 + \underline{\quad} = 22$

Step 2 - cross out the sentence with each answer:

1. The villain cleared paths with the machete tool, then pitched the canvas tents.
2. The villain dropped the rope ladder, then lit the rescue flares.
3. The villain flashed the signal lantern, then stuffed the supply sack.
4. The villain grabbed the grappling hook, then pitched the canvas tents.
5. The villain flashed the signal lantern, then packed the canteen pack.
6. The villain swung the brass telescope, then stuffed the supply sack.
7. The villain cleared paths with the machete tool, then stuffed the supply sack.
8. The villain swung the brass telescope, then packed the canteen pack.
9. The villain swung the brass telescope, then lit the rescue flares.
10. The villain dropped the rope ladder, then pitched the canvas tents.
11. The villain cleared paths with the machete tool, then packed the canteen pack.
12. The villain grabbed the grappling hook, then packed the canteen pack.

Answer Key

The Lost Compass Mystery

Culprit: Jack

Machete Tool · Supply Sack · Left Handed · Brown Fedora · Muddy Swamps

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT CARRY CANVAS TENTS"

$12 \times 6 = 72$ (T) · $7 \times 10 = 70$ (N) · $9 \times 1 = 9$ (C) · $6 \times 11 = 66$ (L) · $5 \times 11 = 55$ (O) · $7 \times 11 = 77$ (I) · $11 \times 3 = 33$ (A) · $9 \times 9 = 81$ (E) · $5 \times 5 = 25$ (D) · $5 \times 3 = 15$ (H) · $7 \times 3 = 21$ (V) · $7 \times 12 = 84$ (R) · $12 \times 10 = 120$ (S) · $6 \times 6 = 36$ (Y)

Clue 2 (Multi-step word problems): "LEFT HANDED"

Scout collected 15 compasses in the morning and 37 compasses in the afternoon, then split them equally among 4 Explorers. How many compasses did each get? = 13 (L) · There were 250 flashlight batteries in all. 18 flashlight batteries were set aside. The rest were shared equally among 4 Explorers. How many flashlight batteries did each get? = 58 (T) · There were 291 flashlight batteries in all. 4 Explorers used 36 flashlight batteries each. The other 3 Explorers shared the rest equally. How many flashlight batteries did each of the other Explorers get? = 49 (N) · There were 342 flashlight batteries in all. 3 Explorers used 22 flashlight batteries each. The other 4 Explorers shared the rest equally. How many flashlight batteries did each of the other Explorers get? = 69 (F) · There were 152 canteen cups in all. 4 Explorers used 10 canteen cups each. The other 4 Explorers shared the rest equally. How many canteen cups did each of the other Explorers get? = 28 (A) · Scout collected 14 canteen cups in the morning and 136 canteen cups in the afternoon, then split them equally among 5 Explorers. How many canteen cups did each get? = 30 (E) · There were 363 compasses in all. 13 compasses were set aside. The rest were shared equally among 10 Explorers. How many compasses did each get? = 35 (H)

Clue 3 (Rounding): "THE SNEAK STUMBLED IN MUDDY SWAMPS"

Round 71 to the nearest ten = 70 (T) · Round 1,144 to the nearest hundred = 1100 (P) · Round 29 to the nearest ten = 30 (H) · Round 8,539 to the nearest thousand = 9000 (M) · Round 3,669 to the nearest hundred = 3700 (B) · Round 191 to the nearest hundred = 200 (E) · Round 108 to the nearest ten = 110 (L) · Round 167 to the nearest ten = 170 (D) · Round 1,301 to the nearest hundred = 1300 (A) · Round 17 to the nearest ten = 20 (S) · Round 133 to the nearest ten = 130 (Y) · Round 2,914 to the nearest hundred = 2900 (I) · Round 915 to the nearest hundred = 900 (U) · Round 2,836 to the nearest thousand = 3000 (K) · Round 429 to the nearest ten = 430 (W) · Round 452 to the nearest hundred = 500 (N)

Clue 4 (Addition): "A STRAP FELL FROM A BROWN FEDORA"

$2018 + 4486 = 6504$ (A) · $5878 + 2852 = 8730$ (B) · $3763 + 4616 = 8379$ (P) · $2649 + 2650 = 5299$ (M) · $2657 + 5602 = 8259$ (W) · $2591 + 4357 = 6948$ (R) · $894 + 1404 = 2298$ (E) · $3433 + 3253 = 6686$ (D) · $3050 + 3013 = 6063$ (T) · $1416 + 2827 = 4243$ (S) · $4241 + 4956 = 9197$ (N) · $3456 + 3748 = 7204$ (L) · $5311 + 2992 = 8303$ (O) · $2340 + 2892 = 5232$ (F)

Clue 5 (Missing addends): surviving statement is box 7 → Jack

$22 + \underline{\quad} = 30 = 8$ · $16 + \underline{\quad} = 27 = 11$ · $10 + \underline{\quad} = 19 = 9$ · $25 + \underline{\quad} = 31 = 6$ · $11 + \underline{\quad} = 14 = 3$ · $20 + \underline{\quad} = 30 = 10$ · $5 + \underline{\quad} = 7 = 2$ · $3 + \underline{\quad} = 7 = 4$ · $32 + \underline{\quad} = 44 = 12$ · $27 + \underline{\quad} = 28 = 1$ · $17 + \underline{\quad} = 22 = 5$