

The Whispering Island Mystery

Grade 3 math · Rounding, Bar models, Multiplication, Fractions of a number · Reading level grades 3-4

Detective: _____ Date: _____

The legendary Golden Compass has vanished from the main cabin at Whispering Island! Without it, the young adventurers cannot navigate the deep jungle. A rogue explorer has hidden it away. Use your camp skills and solve the clues to find out who took the compass before the sun sets!

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

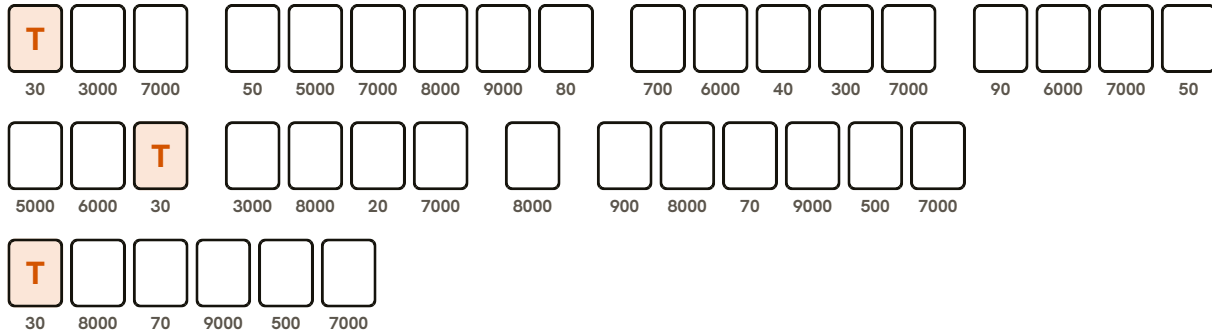
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	SCOUTING TOOL	BACKPACK GEAR	HAND TRAIT	HEADWEAR	SECRET FOIL
Hiker Mia	grappling hook	decoder ring	right handed	brown cap	banana peel
Iris	laser flashlight	walkie talkie	left handed	green helmet	banana peel
Ranger Cleo	metal detector	decoder ring	right handed	brown cap	banana peel
Explorer Zoe	grappling hook	waterproof map	right handed	blue bandana	banana peel
Camper Lily	laser flashlight	smoke bomb	right handed	brown cap	banana peel
Camper Sam	night vision goggles	decoder ring	left handed	green helmet	sticky honey
Luke	metal detector	smoke bomb	right handed	blue bandana	banana peel
Explorer Ben	metal detector	walkie talkie	left handed	brown cap	sticky honey
Cody	laser flashlight	waterproof map	right handed	green helmet	bright flash
Finn	night vision goggles	smoke bomb	right handed	blue bandana	banana peel
Lana	metal detector	walkie talkie	left handed	green helmet	bright flash
Ruby	pocket drone	climbing spikes	left handed	green helmet	bright flash
Scout Leo	laser flashlight	smoke bomb	left handed	blue bandana	banana peel
Ranger Jack	grappling hook	waterproof map	left handed	brown cap	bright flash
Kai	grappling hook	smoke bomb	right handed	blue bandana	bright flash
Penny	pocket drone	walkie talkie	right handed	blue bandana	banana peel
Skye	night vision goggles	decoder ring	right handed	blue bandana	bright flash
Sienna	metal detector	climbing spikes	right handed	blue bandana	banana peel
Otis	night vision goggles	decoder ring	left handed	green helmet	bright flash
Hiker Max	grappling hook	decoder ring	left handed	brown cap	sticky honey
Gemma	laser flashlight	waterproof map	right handed	blue bandana	sticky honey

CLUE 1 Rounding

We found a torn notebook page on the grass. It has a bar model comparing the runaway scout's trail markers to ours. Solve the bars to see what tool they left behind.

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



Round 31 to the nearest ten → **T**

Round 7,420 to the nearest thousand → **E**

Round 3,175 to the nearest thousand → **H**

Round 7,891 to the nearest thousand → **A**

Round 4,826 to the nearest thousand → **N**

Round 907 to the nearest hundred → **W**

Round 663 to the nearest hundred → **R**

Round 49 to the nearest ten → **S**

Round 91 to the nearest ten → **D**

Round 8,780 to the nearest thousand → **K**

Round 473 to the nearest hundred → **I**

Round 22 to the nearest ten → **V**

Round 41 to the nearest ten → **G**

Round 6,216 to the nearest thousand → **O**

Round 337 to the nearest hundred → **U**

Round 67 to the nearest ten → **L**

Round 84 to the nearest ten → **Y**

Scratch space:

CLUE 2 Bar model word problems

Our camp radar screen is a bit fuzzy from the wet jungle air. It only shows distances rounded to the nearest ten meters. Let us round the numbers to trace the target.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was R D E D

32 41 19 18 40 18 26 10

One group collected 15 canteen cups and another group collected 17 canteen cups. How many canteen cups in all?

draw a bar model

Answer: → **R**

The red team has 20 canteen cups and the blue team has 10 canteen cups. How many more canteen cups does the red team have?

draw a bar model

Answer: → **N**

Ranger Pete has 104 trail snacks, packed 4 to a bag. How many bags can be filled?

draw a bar model

Answer: → **A**

One group collected 8 pinecones and another group collected 32 pinecones. How many pinecones in all?

draw a bar model

Answer: → **T**

Ranger Pete has 164 trail snacks, packed 4 to a bag. How many bags can be filled?

draw a bar model

Answer: $\rightarrow$ **I**

One group collected 6 map pieces and another group collected 13 map pieces. How many map pieces in all?

draw a bar model

Answer: → **G**

Ranger Pete has 6 times as many canteen cups as a teammate. The teammate has 3 canteen cups. How many canteen cups does Ranger Pete have?

draw a bar model

Answer: → **H**

CLUE 3
Multiplication facts (1-12)

We found piles of supply boxes stacked up in even groups. Let us multiply the rows to see how many snacks the target packed for their getaway.

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

T																
27	132	1	63	9	30	32	121	121	1	2	60	121	72	28	40	

63	1	30	30	72	81	96	40	28	40	28	40	121	1	1	30

$9 \times 3 = \square \rightarrow \boxed{\text{T}}$

$7 \times 9 = \square \rightarrow \boxed{\text{Y}}$

$7 \times 4 = \square \rightarrow \boxed{\text{N}}$

$11 \times 11 = \square \rightarrow \boxed{\text{P}}$

$2 \times 1 = \square \rightarrow \boxed{\text{D}}$

$5 \times 12 = \square \rightarrow \boxed{\text{U}}$

$5 \times 8 = \square \rightarrow \boxed{\text{A}}$

$4 \times 8 = \square \rightarrow \boxed{\text{I}}$

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

$1 \times 1 = \square \rightarrow \boxed{\text{E}}$

$11 \times 12 = \square \rightarrow \boxed{\text{H}}$

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

$8 \times 12 = \square \rightarrow \boxed{\text{B}}$

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

$3 \times 10 = \square \rightarrow \boxed{\text{L}}$

Scratch space:

CLUE 4

Fractions of a number

The runaway dropped a bag of shiny rocks. A fraction of the rocks have arrow signs painted on them. Find the fraction to see which path they took.

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

W																	
10	8	11	23	22	16	21	9	38	19	7	35	18	4	38	39	22	8
38	9	16	21	9	16	9	23	16	4	18	8	4	19	9	7	39	

$1/6 \text{ of } 60 = \square \rightarrow \boxed{\text{W}}$

$1/2 \text{ of } 32 = \square \rightarrow \boxed{\text{N}}$

$6/10 \text{ of } 15 = \square \rightarrow \boxed{\text{A}}$

$1/2 \text{ of } 38 = \square \rightarrow \boxed{\text{R}}$

$1/10 \text{ of } 180 = \square \rightarrow \boxed{\text{H}}$

$2/8 \text{ of } 44 = \square \rightarrow \boxed{\text{F}}$

$2/10 \text{ of } 195 = \square \rightarrow \boxed{\text{L}}$

$2/5 \text{ of } 10 = \square \rightarrow \boxed{\text{T}}$

$2/4 \text{ of } 14 = \square \rightarrow \boxed{\text{I}}$

$1/10 \text{ of } 80 = \square \rightarrow \boxed{\text{E}}$

$3/6 \text{ of } 42 = \square \rightarrow \boxed{\text{D}}$

$2/8 \text{ of } 92 = \square \rightarrow \boxed{\text{O}}$

$2/8 \text{ of } 140 = \square \rightarrow \boxed{\text{G}}$

$2/8 \text{ of } 152 = \square \rightarrow \boxed{\text{B}}$

$2/6 \text{ of } 66 = \square \rightarrow \boxed{\text{U}}$

Scratch space:

CLUE 5**Fractions of a number - the last clue**

We found a map of the island divided into equal areas. The runner crossed a fraction of these zones. Calculate the fraction to find their hideout.

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:

$5/10 \text{ of } 16 = \boxed{}$

$2/3 \text{ of } 3 = \boxed{}$

$1/3 \text{ of } 3 = \boxed{}$

$4/10 \text{ of } 15 = \boxed{}$

$5/10 \text{ of } 10 = \boxed{}$

$1/10 \text{ of } 30 = \boxed{}$

$1/6 \text{ of } 24 = \boxed{}$

$2/6 \text{ of } 36 = \boxed{}$

$9/10 \text{ of } 10 = \boxed{}$

$3/6 \text{ of } 22 = \boxed{}$

$2/8 \text{ of } 40 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain searches the sandy beach with a metal detector, then escapes up the cliff with climbing spikes.
2. The villain swings across the river using a grappling hook, then crosses the swamp using a waterproof map.
3. The villain sneaks through the dark with night vision goggles, then calls for backup on a walkie talkie.
4. The villain searches the sandy beach with a metal detector, then crosses the swamp using a waterproof map.
5. The villain swings across the river using a grappling hook, then calls for backup on a walkie talkie.
6. The villain sneaks through the dark with night vision goggles, then escapes up the cliff with climbing spikes.
7. The villain sneaks through the dark with night vision goggles, then vanishes into the trees with a smoke bomb.
8. The villain searches the sandy beach with a metal detector, then vanishes into the trees with a smoke bomb.
9. The villain scouts the area using a pocket drone, then calls for backup on a walkie talkie.
10. The villain lights up the dark cave with a laser flashlight, then crosses the swamp using a waterproof map.
11. The villain lights up the dark cave with a laser flashlight, then unlocks the secret box with a decoder ring.
12. The villain lights up the dark cave with a laser flashlight, then vanishes into the trees with a smoke bomb.

Answer Key

The Whispering Island Mystery

Culprit: Finn

night vision goggles · smoke bomb · right handed · blue bandana · banana peel

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SNEAKY ROGUE DOES NOT HAVE A WALKIE TALKIE"

Round 31 to the nearest ten = 30 (T) · Round 7,420 to the nearest thousand = 7000 (E) · Round 3,175 to the nearest thousand = 3000 (H) · Round 7,891 to the nearest thousand = 8000 (A) · Round 4,826 to the nearest thousand = 5000 (N) · Round 907 to the nearest hundred = 900 (W) · Round 663 to the nearest hundred = 700 (R) · Round 49 to the nearest ten = 50 (S) · Round 91 to the nearest ten = 90 (D) · Round 8,780 to the nearest thousand = 9000 (K) · Round 473 to the nearest hundred = 500 (I) · Round 22 to the nearest ten = 20 (V) · Round 41 to the nearest ten = 40 (G) · Round 6,216 to the nearest thousand = 6000 (O) · Round 337 to the nearest hundred = 300 (U) · Round 67 to the nearest ten = 70 (L) · Round 84 to the nearest ten = 80 (Y)

Clue 2 (Bar model word problems): "RIGHT HANDED"

One group collected 15 canteen cups and another group collected 17 canteen cups. How many canteen cups in all? = 32 (R) · The red team has 20 canteen cups and the blue team has 10 canteen cups. How many more canteen cups does the red team have? = 10 (N) · Ranger Pete has 104 trail snacks, packed 4 to a bag. How many bags can be filled? = 26 (A) · One group collected 8 pinecones and another group collected 32 pinecones. How many pinecones in all? = 40 (T) · Ranger Pete has 164 trail snacks, packed 4 to a bag. How many bags can be filled? = 41 (I) · One group collected 6 map pieces and another group collected 13 map pieces. How many map pieces in all? = 19 (G) · Ranger Pete has 6 times as many canteen cups as a teammate. The teammate has 3 canteen cups. How many canteen cups does Ranger Pete have? = 18 (H)

Clue 3 (Multiplication facts (1-12)): "THEY SLIPPED UPON A YELLOW BANANA PEEL"

$9 \times 3 = 27$ (T) · $7 \times 9 = 63$ (Y) · $7 \times 4 = 28$ (N) · $11 \times 11 = 121$ (P) · $2 \times 1 = 2$ (D) · $5 \times 12 = 60$ (U) · $5 \times 8 = 40$ (A) · $4 \times 8 = 32$ (I) · $6 \times 12 = 72$ (O) · $1 \times 1 = 1$ (E) · $11 \times 12 = 132$ (H) · $9 \times 1 = 9$ (S) · $8 \times 12 = 96$ (B) · $9 \times 9 = 81$ (W) · $3 \times 10 = 30$ (L)

Clue 4 (Fractions of a number): "WE FOUND A BRIGHT BLUE BANDANA ON THE TRAIL"

$1/6$ of 60 = 10 (W) · $1/2$ of 32 = 16 (N) · $6/10$ of 15 = 9 (A) · $1/2$ of 38 = 19 (R) · $1/10$ of 180 = 18 (H) · $2/8$ of 44 = 11 (F) · $2/10$ of 195 = 39 (L) · $2/5$ of 10 = 4 (T) · $2/4$ of 14 = 7 (I) · $1/10$ of 80 = 8 (E) · $3/6$ of 42 = 21 (D) · $2/8$ of 92 = 23 (O) · $2/8$ of 140 = 35 (G) · $2/8$ of 152 = 38 (B) · $2/6$ of 66 = 22 (U)

Clue 5 (Fractions of a number): surviving statement is box 7 → Finn

$5/10$ of 16 = 8 · $2/3$ of 3 = 2 · $1/3$ of 3 = 1 · $4/10$ of 15 = 6 · $5/10$ of 10 = 5 · $1/10$ of 30 = 3 · $1/6$ of 24 = 4 · $2/6$ of 36 = 12 · $9/10$ of 10 = 9 · $3/6$ of 22 = 11 · $2/8$ of 40 = 10