



The Golden Compass Caper

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

Detective: _____ **Date:** _____

Someone snuck into the Chief Archeologist's tent and took the legendary Golden Compass! The camp is full of suspect adventurers. Follow the clues, solve the math problems, and find the Rogue Explorer before they escape into the deep jungle!

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 CHOICE	GADGET COMPANION	DOMINANT HAND	HEADWEAR DISGUISE	CAMP PHOBIA
Alex	pocket compass	walkie talkie	right handed	green camo bandanna	spider webs
Zoe	glider wing	pet monkey	left handed	muddy safari hat	banana peels
Ruby	jungle machete	pet monkey	right handed	muddy safari hat	banana peels
Finn	jungle machete	walkie talkie	left handed	blue baseball cap	spider webs
Cleo	jungle machete	smoke bomb	left handed	muddy safari hat	shiny mirrors
Wyatt	grappling hook	spy glass	right handed	green camo bandanna	spider webs
Jake	glider wing	walkie talkie	right handed	blue baseball cap	spider webs
Gemma	rope dart	walkie talkie	left handed	muddy safari hat	spider webs
Amy	rope dart	smoke bomb	left handed	green camo bandanna	banana peels
Ben	glider wing	smoke bomb	left handed	blue baseball cap	banana peels
Kira	jungle machete	walkie talkie	right handed	muddy safari hat	shiny mirrors
Lara	glider wing	spy glass	right handed	blue baseball cap	shiny mirrors
Ollie	jungle machete	spy glass	left handed	muddy safari hat	banana peels
Sam	pocket compass	walkie talkie	right handed	blue baseball cap	shiny mirrors
Mia	pocket compass	walkie talkie	left handed	green camo bandanna	spider webs
Toby	rope dart	pet monkey	left handed	muddy safari hat	spider webs
Gabe	grappling hook	smoke bomb	right handed	muddy safari hat	spider webs
Penny	jungle machete	walkie talkie	right handed	muddy safari hat	spider webs
Ned	jungle machete	flash light	right handed	muddy safari hat	spider webs
May	rope dart	pet monkey	right handed	muddy safari hat	spider webs
Max	glider wing	spy glass	right handed	muddy safari hat	spider webs

CLUE 1 Rounding

The camp radar screen only shows rounded distances to keep the map clear. Round these numbers to find where the thief fled.

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

T			T											T			
50	90	300	50	90	2900	300	2300	7000	30	300	700	1700	30	50	370	700	300
700	3700	30	430	300	3000	30	3700	3000	700								

Round 49 to the nearest ten → **T**

Round 3,696 to the nearest hundred → **M**

Round 1,675 to the nearest hundred → **N**

Round 27 to the nearest ten → **O**

Round 433 to the nearest ten → **K**

Round 90 to the nearest ten → **H**

Round 704 to the nearest hundred → **S**

Round 314 to the nearest hundred → **E**

Round 3,073 to the nearest thousand → **B**

Round 2,928 to the nearest hundred → **I**

Round 7,068 to the nearest thousand → **D**

Round 2,271 to the nearest hundred → **F**

Round 368 to the nearest ten → **U**

Scratch space:

CLUE 2

We need to add up all the heavy climbing supplies left in the crates to see who packed light.

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

Diagram showing two rows of boxes representing a sequence of numbers. The top row has 15 boxes, and the bottom row has 15 boxes. Some boxes are shaded orange and contain the letter 'T'. The numbers below the boxes are:

Top row: 8418, 8686, 9378, 9128, 6860, 9451, 8686, 8418, 8686, 4880, 7609, 7931, 9378, 7931, 8418, 8686, 6860, 9378, 5662

Bottom row: 2528, 7874, 9378, 7931, 4880, 9128, 6860, 9451, 8686, 8418, 9451, 4236, 6410, 5278, 9378

$$2849 + 5569 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2999 + 4932 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$1193 + 1335 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$3338 + 4536 = \boxed{} \rightarrow \boxed{\text{S}}$$

$5554 + 3824 = \boxed{} \rightarrow \boxed{\text{E}}$

$3830 + 5621 = \boxed{} \rightarrow \boxed{\mathbf{G}}$

$$4907 + 3779 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$4197 + 2663 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$3538 + 1740 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$1862 + 3800 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$5113 + 4015 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$2596 + 5013 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$2669 + 3741 = \boxed{} \rightarrow \boxed{0}$$

$$2074 + 2162 = \boxed{} \rightarrow \boxed{\text{L}}$$

$3080 + 1800 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

Scratch space:

CLUE 3
Subtraction

A troop of monkeys swiped some of our gear! Subtract the missing items from our total count to see what remains.

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

T			T														
5000	3441	3777	5000	3441	3150	3777	1731	8909	3128	2368	3128	1658	3128	6836	1731	8909	5850

8664	4534	3150	4612	3777	8909	1658	3777	7764	8664

$6014 - 1014 = \square \rightarrow \text{T}$

$6131 - 2354 = \square \rightarrow \text{E}$

$12230 - 4466 = \square \rightarrow \text{B}$

$7661 - 4533 = \square \rightarrow \text{A}$

$9207 - 1755 = \square \rightarrow \text{M}$

$6142 - 1608 = \square \rightarrow \text{P}$

$7387 - 1537 = \square \rightarrow \text{O}$

$5764 - 3396 = \square \rightarrow \text{N}$

$4338 - 897 = \square \rightarrow \text{H}$

$5980 - 4249 = \square \rightarrow \text{F}$

$4847 - 235 = \square \rightarrow \text{D}$

$11834 - 3170 = \square \rightarrow \text{S}$

$10710 - 1801 = \square \rightarrow \text{R}$

$6145 - 2995 = \square \rightarrow \text{I}$

$10146 - 3310 = \square \rightarrow \text{Y}$

$6438 - 4780 = \square \rightarrow \text{W}$

Scratch space:

CLUE 4
Multiplication facts (1-12)

The survival bars are packed in neat rows inside the pantry. Multiply the rows to see how many snacks we have left.

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

M						M											
3	63	42	7	45	12	3	81	24	81	7	81	45	11	49	81	108	
84	81	24	7	12	63	110	42										

$1 \times 3 = \square \rightarrow \text{M}$	$10 \times 11 = \square \rightarrow \text{N}$	$7 \times 7 = \square \rightarrow \text{H}$	
$6 \times 7 = \square \rightarrow \text{D}$	$7 \times 12 = \square \rightarrow \text{W}$	$6 \times 2 = \square \rightarrow \text{O}$	
$12 \times 2 = \square \rightarrow \text{S}$	$1 \times 7 = \square \rightarrow \text{F}$	$9 \times 7 = \square \rightarrow \text{U}$	$9 \times 5 = \square \rightarrow \text{R}$
$11 \times 1 = \square \rightarrow \text{I}$	$9 \times 12 = \square \rightarrow \text{T}$	$9 \times 9 = \square \rightarrow \text{A}$	

Scratch space:

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

We have to divide the rescue radios equally among our search teams before we head into the thick trees.

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:

$9 \div 3 = \boxed{}$

$132 \div 11 = \boxed{}$

$28 \div 7 = \boxed{}$

$24 \div 12 = \boxed{}$

$16 \div 2 = \boxed{}$

$7 \div 1 = \boxed{}$

$10 \div 10 = \boxed{}$

$10 \div 2 = \boxed{}$

$42 \div 7 = \boxed{}$

$20 \div 2 = \boxed{}$

$55 \div 5 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain shot a grappling hook, then chattered on a walkie talkie.
2. The villain swung on a rope dart, then peered through a spy glass.
3. The villain slashed a jungle machete, then shined a bright flash light.
4. The villain slashed a jungle machete, then chattered on a walkie talkie.
5. The villain soared on a glider wing, then chattered on a walkie talkie.
6. The villain swung on a rope dart, then chattered on a walkie talkie.
7. The villain soared on a glider wing, then distracted guards with a pet monkey.
8. The villain checked a pocket compass, then distracted guards with a pet monkey.
9. The villain swung on a rope dart, then distracted guards with a pet monkey.
10. The villain shot a grappling hook, then peered through a spy glass.
11. The villain soared on a glider wing, then shined a bright flash light.
12. The villain soared on a glider wing, then peered through a spy glass.

Answer Key

The Golden Compass Caper

Culprit: May

rope dart · pet monkey · right handed · muddy safari hat · spider webs

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

Clue 1 (Rounding): "THE THIEF DOES NOT USE SMOKE BOMBS"

Round 49 to the nearest ten = 50 (T) · Round 3,696 to the nearest hundred = 3700 (M) · Round 1,675 to the nearest hundred = 1700 (N) · Round 27 to the nearest ten = 30 (O) · Round 433 to the nearest ten = 430 (K) · Round 90 to the nearest ten = 90 (H) · Round 704 to the nearest hundred = 700 (S) · Round 314 to the nearest hundred = 300 (E) · Round 3,073 to the nearest thousand = 3000 (B) · Round 2,928 to the nearest hundred = 2900 (I) · Round 7,068 to the nearest thousand = 7000 (D) · Round 2,271 to the nearest hundred = 2300 (F) · Round 368 to the nearest ten = 370 (U)

Clue 2 (Addition): "THE RIGHT HANDED THIEF USED A RIGHT GLOVE"

$2849 + 5569 = 8418$ (T) · $2999 + 4932 = 7931$ (D) · $1193 + 1335 = 2528$ (U) · $3338 + 4536 = 7874$ (S) · $5554 + 3824 = 9378$ (E) · $3830 + 5621 = 9451$ (G) · $4907 + 3779 = 8686$ (H) · $4197 + 2663 = 6860$ (I) · $3538 + 1740 = 5278$ (V) · $1862 + 3800 = 5662$ (F) · $5113 + 4015 = 9128$ (R) · $2596 + 5013 = 7609$ (N) · $2669 + 3741 = 6410$ (O) · $2074 + 2162 = 4236$ (L) · $3080 + 1800 = 4880$ (A)

Clue 3 (Subtraction): "THE THIEF RAN AWAY FROM SPIDER WEBS"

$6014 - 1014 = 5000$ (T) · $6131 - 2354 = 3777$ (E) · $12230 - 4466 = 7764$ (B) · $7661 - 4533 = 3128$ (A) · $9207 - 1755 = 7452$ (M) · $6142 - 1608 = 4534$ (P) · $7387 - 1537 = 5850$ (O) · $5764 - 3396 = 2368$ (N) · $4338 - 897 = 3441$ (H) · $5980 - 4249 = 1731$ (F) · $4847 - 235 = 4612$ (D) · $11834 - 3170 = 8664$ (S) · $10710 - 1801 = 8909$ (R) · $6145 - 2995 = 3150$ (I) · $10146 - 3310 = 6836$ (Y) · $6438 - 4780 = 1658$ (W)

Clue 4 (Multiplication facts (1-12)): "MUD FROM A SAFARI HAT WAS FOUND"

$1 \times 3 = 3$ (M) · $10 \times 11 = 110$ (N) · $7 \times 7 = 49$ (H) · $6 \times 7 = 42$ (D) · $7 \times 12 = 84$ (W) · $6 \times 2 = 12$ (O) · $12 \times 2 = 24$ (S) · $1 \times 7 = 7$ (F) · $9 \times 7 = 63$ (U) · $9 \times 5 = 45$ (R) · $11 \times 1 = 11$ (I) · $9 \times 12 = 108$ (T) · $9 \times 9 = 81$ (A)

Clue 5 (Division facts (1-12)): surviving statement is box 9 → May

$9 \div 3 = 3$ · $132 \div 11 = 12$ · $28 \div 7 = 4$ · $24 \div 12 = 2$ · $16 \div 2 = 8$ · $7 \div 1 = 7$ · $10 \div 10 = 1$ · $10 \div 2 = 5$ · $42 \div 7 = 6$ · $20 \div 2 = 10$ · $55 \div 5 = 11$