The Mystery of the Golden Compass

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

Detective: _____ **Date:** _____

Someone swiped the Golden Compass from Director Barnaby tent in the jungle camp. Solve the math clues to uncover the culprit.

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 Ranger is _____

Possible suspects

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

NAME	PRIMARY TOOL	SECONDARY GADGET	DOMINANT HAND	HAIR STYLE	DISTRACTION
Explorer Eve	Treasure Map	Smoke Bomb	Right Handed	Curly Cap	Shiny Coins
Explorer Eli	Treasure Map	Bronze Key	Left Handed	Braided Tail	Honey Pots
Captain Cole	Treasure Map	Smoke Bomb	Left Handed	Braided Tail	Shiny Coins
Tracker Tina	Brass Telescope	Bronze Key	Left Handed	Braided Tail	Loud Drums
Tracker Tim	Machete Blade	Bronze Key	Right Handed	Braided Tail	Honey Pots
Tracker Toby	Brass Telescope	Pocket Whistle	Left Handed	Short Crop	Honey Pots
Ranger Rosa	Grappling Hook	Leather Canteen	Right Handed	Curly Cap	Shiny Coins
Scout Sarah	Treasure Map	Rope Coil	Left Handed	Braided Tail	Honey Pots
Scout Sierra	Treasure Map	Rope Coil	Left Handed	Curly Cap	Shiny Coins
Scout Sam	Signal Lantern	Bronze Key	Right Handed	Curly Cap	Shiny Coins
Captain Carl	Signal Lantern	Smoke Bomb	Left Handed	Braided Tail	Honey Pots
Guide Gary	Grappling Hook	Leather Canteen	Left Handed	Curly Cap	Loud Drums
Ranger Rita	Grappling Hook	Bronze Key	Left Handed	Curly Cap	Honey Pots
Guide Gabe	Brass Telescope	Rope Coil	Right Handed	Braided Tail	Shiny Coins
Explorer Emma	Treasure Map	Bronze Key	Left Handed	Curly Cap	Loud Drums
Guide Grace	Grappling Hook	Pocket Whistle	Left Handed	Braided Tail	Honey Pots
Scout Sally	Signal Lantern	Smoke Bomb	Right Handed	Curly Cap	Shiny Coins
Tracker Tess	Signal Lantern	Pocket Whistle	Right Handed	Curly Cap	Honey Pots
Captain Cody	Signal Lantern	Pocket Whistle	Left Handed	Braided Tail	Honey Pots
Guide Greta	Brass Telescope	Rope Coil	Right Handed	Curly Cap	Honey Pots
Ranger Rick	Signal Lantern	Pocket Whistle	Left Handed	Short Crop	Honey Pots

CLUE 1 Addition

Director Barnaby tallies all the supply crates left in the storage tent to see what was searched.

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



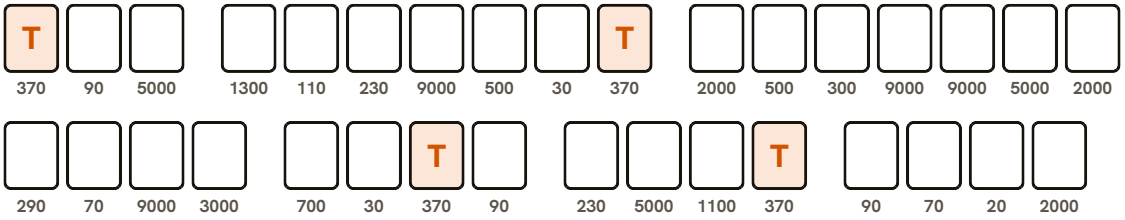
1287 + 1709 = ☐ → T	3338 + 3105 = ☐ → R	3518 + 2614 = ☐ → H
842 + 1766 = ☐ → U	2101 + 1010 = ☐ → P	3658 + 1889 = ☐ → C
1363 + 2165 = ☐ → E	4425 + 3580 = ☐ → S	3613 + 2231 = ☐ → D
3933 + 5922 = ☐ → L	4297 + 5039 = ☐ → N	812 + 1678 = ☐ → I
1351 + 1844 = ☐ → V	5230 + 4031 = ☐ → A	2762 + 4310 = ☐ → O

Scratch space:

CLUE 2 Rounding

The camp radar scanner rounds the distance to nearby hikers to show general positions.

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



Round 371 to the nearest ten ☐ → T

Round 290 to the nearest ten ☐ → M

Round 66 to the nearest ten ☐ → A

Round 9,183 to the nearest thousand ☐ → P

Round 91 to the nearest ten ☐ → H

Round 1,338 to the nearest hundred ☐ → C

Round 527 to the nearest hundred ☐ → R

Round 27 to the nearest ten ☐ → I

Round 1,065 to the nearest hundred ☐ → F

Round 16 to the nearest ten ☐ → N

Round 233 to the nearest ten ☐ → L

Round 300 to the nearest hundred ☐ → O

Round 109 to the nearest ten ☐ → U

Round 3,320 to the nearest thousand ☐ → S

Round 5,321 to the nearest thousand ☐ → E

Round 686 to the nearest hundred ☐ → W

Round 2,035 to the nearest thousand ☐ → D

Scratch space:

CLUE 3 Subtraction

The scouts calculate how many trail rations remain after the thief took a handful.

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



8287 - 1202 = ☐ → H

10323 - 4335 = ☐ → D

10478 - 2419 = ☐ → T

8617 - 4227 = ☐ → L

4844 - 1961 = ☐ → R

9591 - 1274 = ☐ → Y

8467 - 2043 = ☐ → N

2443 - 966 = ☐ → C

5723 - 1897 = ☐ → O

6364 - 4017 = ☐ → G

7604 - 2955 = ☐ → S

5547 - 101 = ☐ → P

8450 - 975 = ☐ → I

9786 - 2887 = ☐ → A

5641 - 1591 = ☐ → E

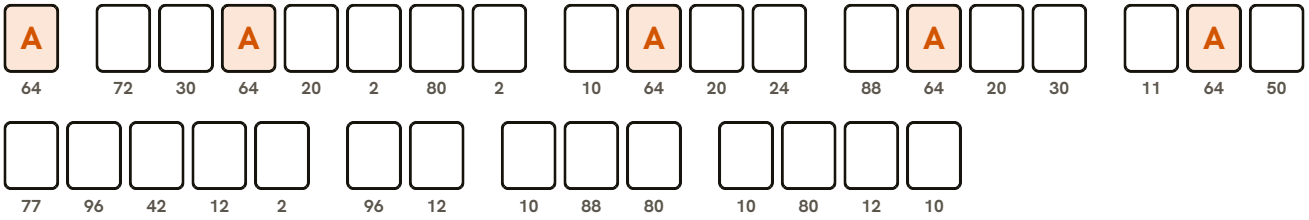
2684 - 297 = ☐ → V

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The search team checks equal rows of tents along the riverbank.

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


A A A

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

> The scouts divide the search grid evenly among the rescue teams.

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:

54 ÷ 6 = ☐ | 15 ÷ 5 = ☐ | 48 ÷ 12 = ☐ | 42 ÷ 6 = ☐ | 18 ÷ 9 = ☐

60 ÷ 10 = ☐ | 120 ÷ 12 = ☐ | 30 ÷ 6 = ☐ | 64 ÷ 8 = ☐ | 66 ÷ 6 = ☐

96 ÷ 8 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain lit the dark path with a signal lantern, then threw a smoke bomb.
2. The villain swung across the creek with a grappling hook, then unlocked a crate with a bronze key.
3. The villain swung across the creek with a grappling hook, then blew a pocket whistle.
4. The villain lit the dark path with a signal lantern, then blew a pocket whistle.
5. The villain lit the dark path with a signal lantern, then drank from a leather canteen.
6. The villain followed a secret treasure map, then tied knots with a rope coil.
7. The villain followed a secret treasure map, then blew a pocket whistle.
8. The villain spied through a brass telescope, then blew a pocket whistle.
9. The villain followed a secret treasure map, then unlocked a crate with a bronze key.
10. The villain cleared a path with a machete blade, then drank from a leather canteen.
11. The villain lit the dark path with a signal lantern, then tied knots with a rope coil.
12. The villain spied through a brass telescope, then tied knots with a rope coil.

TEACHER / PARENT

Answer Key

The Mystery of the Golden Compass

Culprit: Captain Carl

Signal Lantern · Smoke Bomb · Left Handed · Braided Tail · Honey Pots

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

Clue 1 (Addition): "THE VILLAIN DID NOT USE A ROPE COIL"

1287 + 1709 = 2996 (T) · 3338 + 3105 = 6443 (R) · 3518 + 2614 = 6132 (H) · 842 + 1766 = 2608 (U) · 2101 + 1010 = 3111 (P) · 3658 + 1889 = 5547 (C) · 1363 + 2165 = 3528 (E) · 4425 + 3580 = 8005 (S) · 3613 + 2231 = 5844 (D) · 3933 + 5922 = 9855 (L) · 4297 + 5039 = 9336 (N) · 812 + 1678 = 2490 (I) · 1351 + 1844 = 3195 (V) · 5230 + 4031 = 9261 (A) · 2762 + 4310 = 7072 (O)

Clue 2 (Rounding): "THE CULPRIT DROPPED MAPS WITH LEFT HAND"

Round 371 to the nearest ten = 370 (T) · Round 290 to the nearest ten = 290 (M) · Round 66 to the nearest ten = 70 (A) · Round 9,183 to the nearest thousand = 9000 (P) · Round 91 to the nearest ten = 90 (H) · Round 1,338 to the nearest hundred = 1300 (C) · Round 527 to the nearest hundred = 500 (R) · Round 27 to the nearest ten = 30 (I) · Round 1,065 to the nearest hundred = 1100 (F) · Round 16 to the nearest ten = 20 (N) · Round 233 to the nearest ten = 230 (L) · Round 300 to the nearest hundred = 300 (O) · Round 109 to the nearest ten = 110 (U) · Round 3,320 to the nearest thousand = 3000 (S) · Round 5,321 to the nearest thousand = 5000 (E) · Round 686 to the nearest hundred = 700 (W) · Round 2,035 to the nearest thousand = 2000 (D)

Clue 3 (Subtraction): "HONEY POTS DISTRACTED THE VILLAIN AT NIGHT"

8287 - 1202 = 7085 (H) · 10323 - 4335 = 5988 (D) · 10478 - 2419 = 8059 (T) · 8617 - 4227 = 4390 (L) · 4844 - 1961 = 2883 (R) · 9591 - 1274 = 8317 (Y) · 8467 - 2043 = 6424 (N) · 2443 - 966 = 1477 (C) · 5723 - 1897 = 3826 (O) · 6364 - 4017 = 2347 (G) · 7604 - 2955 = 4649 (S) · 5547 - 101 = 5446 (P) · 8450 - 975 = 7475 (I) · 9786 - 2887 = 6899 (A) · 5641 - 1591 = 4050 (E) · 2684 - 297 = 2387 (V)

Clue 4 (Multiplication facts (1-12)): "A BRAIDED TAIL HAIR WAS FOUND ON THE TENT"

8 × 8 = 64 (A) · 8 × 12 = 96 (O) · 11 × 1 = 11 (W) · 11 × 8 = 88 (H) · 12 × 2 = 24 (L) · 10 × 8 = 80 (E) · 7 × 11 = 77 (F) · 2 × 6 = 12 (N) · 2 × 1 = 2 (D) · 6 × 5 = 30 (R) · 1 × 10 = 10 (T) · 5 × 10 = 50 (S) · 5 × 4 = 20 (I) · 6 × 12 = 72 (B) · 6 × 7 = 42 (U)

Clue 5 (Division facts (1-12)): surviving statement is box 1 → Captain Carl

54 ÷ 6 = 9 · 15 ÷ 5 = 3 · 48 ÷ 12 = 4 · 42 ÷ 6 = 7 · 18 ÷ 9 = 2 · 60 ÷ 10 = 6 · 120 ÷ 12 = 10 · 30 ÷ 6 = 5 · 64 ÷ 8 = 8 · 66 ÷ 6 = 11 · 96 ÷ 8 = 12