The Case of the Missing Golden Compass

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

Detective: _____ **Date:** _____

The legendary Golden Compass has vanished from the Explorer Cove main lodge right before the big night hike! Someone snuck inside, grabbed the compass, and left behind a trail of clues. Use your math skills and deductive powers to figure out who took it!

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 Sneaky Saboteur is _____

Possible suspects

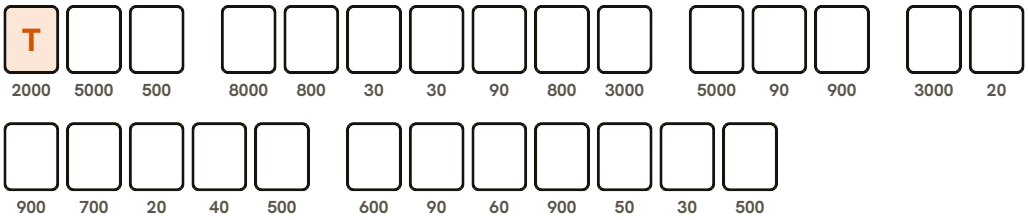
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	GEAR ITEM	SECRET GADGET	STRAP STYLE	HAT COLOR	DISTRACTION
Guide Gabe	Pocket Radar	Laser Pointer	Right Shoulder Strap	Dark Blue Hat	Shiny Mirrors
Scout Toby	Grappling Hook	Decoder Ring	Right Shoulder Strap	Forest Green Hat	Salty Snacks
Cadet Leo	Pocket Radar	Chirp Whistle	Left Shoulder Strap	Forest Green Hat	Shiny Mirrors
Tracker Tara	Glider Wings	Smoke Capsule	Right Shoulder Strap	Bright Red Hat	Loud Bells
Captain Kip	Flash Shield	Laser Pointer	Right Shoulder Strap	Dark Blue Hat	Shiny Mirrors
Camper Cole	Climbing Claws	Chirp Whistle	Right Shoulder Strap	Forest Green Hat	Shiny Mirrors
Explorer Owen	Grappling Hook	Beacon Tag	Left Shoulder Strap	Bright Red Hat	Salty Snacks
Cadet Cora	Climbing Claws	Beacon Tag	Left Shoulder Strap	Forest Green Hat	Salty Snacks
Scout Sam	Glider Wings	Smoke Capsule	Left Shoulder Strap	Forest Green Hat	Salty Snacks
Guide Ivy	Glider Wings	Smoke Capsule	Right Shoulder Strap	Forest Green Hat	Salty Snacks
Hiker Hazel	Grappling Hook	Chirp Whistle	Right Shoulder Strap	Dark Blue Hat	Loud Bells
Captain Penny	Climbing Claws	Chirp Whistle	Left Shoulder Strap	Dark Blue Hat	Loud Bells
Guide Grace	Glider Wings	Smoke Capsule	Right Shoulder Strap	Dark Blue Hat	Shiny Mirrors
Camper Cleo	Climbing Claws	Smoke Capsule	Left Shoulder Strap	Forest Green Hat	Salty Snacks
Ranger Rex	Climbing Claws	Beacon Tag	Right Shoulder Strap	Dark Blue Hat	Shiny Mirrors
Hiker Hugo	Pocket Radar	Chirp Whistle	Right Shoulder Strap	Forest Green Hat	Loud Bells
Explorer Maya	Glider Wings	Beacon Tag	Right Shoulder Strap	Bright Red Hat	Salty Snacks
Ranger Rita	Grappling Hook	Laser Pointer	Right Shoulder Strap	Bright Red Hat	Shiny Mirrors
Tracker Ben	Flash Shield	Chirp Whistle	Left Shoulder Strap	Dark Blue Hat	Shiny Mirrors
Ranger Ruby	Grappling Hook	Beacon Tag	Right Shoulder Strap	Dark Blue Hat	Shiny Mirrors
Camper Finn	Pocket Radar	Chirp Whistle	Right Shoulder Strap	Dark Blue Hat	Loud Bells

CLUE 1 Rounding

> The scout radar screen only displays rounded distances to nearby tracks. Round the distance to estimate how close the intruder got.

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



Round 2,142 to the nearest thousand ☐ → **T**

Round 7,624 to the nearest thousand ☐ → **V**

Round 20 to the nearest ten ☐ → **O**

Round 5,088 to the nearest thousand ☐ → **H**

Round 30 to the nearest ten ☐ → **L**

Round 613 to the nearest hundred ☐ → **C**

Round 64 to the nearest ten ☐ → **P**

Round 827 to the nearest hundred ☐ → **I**

Round 2,917 to the nearest thousand ☐ → **N**

Round 52 to the nearest ten ☐ → **U**

Round 463 to the nearest hundred ☐ → **E**

Round 93 to the nearest ten ☐ → **A**

Round 720 to the nearest hundred ☐ → **M**

Round 908 to the nearest hundred ☐ → **S**

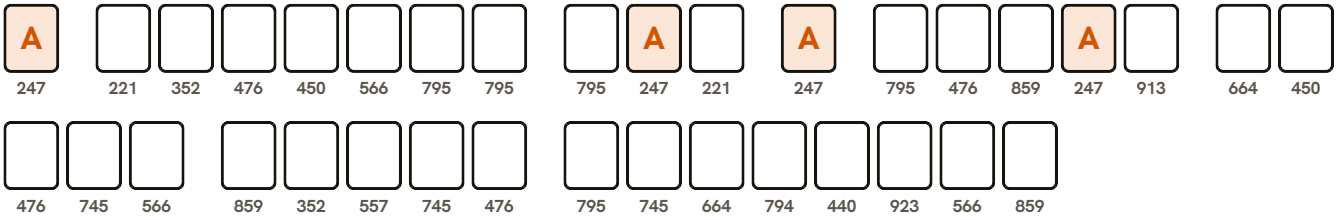
Round 42 to the nearest ten ☐ → **K**

Scratch space:

CLUE 2 Addition

To unlock the map room, team leads must tally up all the trail markers collected today.

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



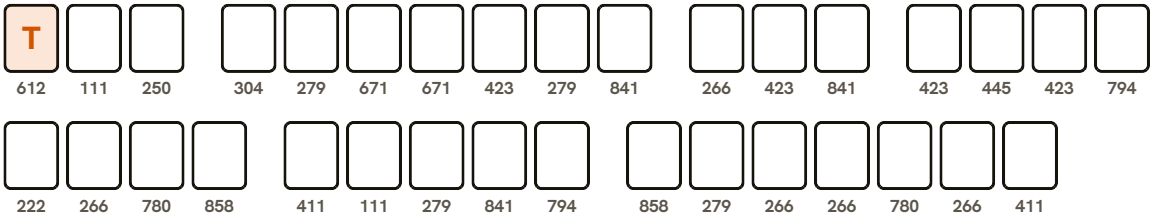
125 + 122 = ☐ → A	181 + 269 = ☐ → N	390 + 523 = ☐ → P
343 + 214 = ☐ → G	89 + 132 = ☐ → W	354 + 212 = ☐ → E
544 + 250 = ☐ → U	380 + 284 = ☐ → O	207 + 269 = ☐ → T
510 + 235 = ☐ → H	387 + 536 = ☐ → D	159 + 281 = ☐ → L
393 + 402 = ☐ → S	441 + 418 = ☐ → R	231 + 121 = ☐ → I

Scratch space:

CLUE 3 Subtraction

> The camp supply manager checks how many lanterns remain after counting what was taken.

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



965 - 353 = ☐ → T

1032 - 252 = ☐ → O

1022 - 164 = ☐ → M

649 - 226 = ☐ → A

1039 - 198 = ☐ → N

515 - 293 = ☐ → F

611 - 307 = ☐ → V

663 - 218 = ☐ → W

692 - 281 = ☐ → S

303 - 37 = ☐ → R

1070 - 399 = ☐ → L

1000 - 206 = ☐ → Y

392 - 281 = ☐ → H

533 - 254 = ☐ → I

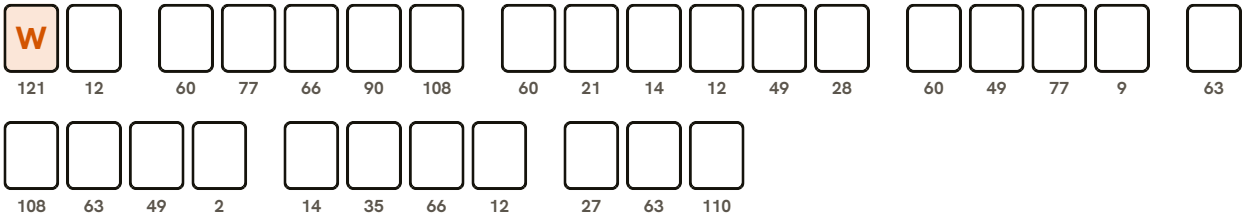
587 - 337 = ☐ → E

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The explorers arranged emergency flares into equal rows across the supply tent floor.

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



11 × 11 = ☐ → W	7 × 11 = ☐ → O	9 × 1 = ☐ → M			
1 × 12 = ☐ → E	9 × 7 = ☐ → A	11 × 10 = ☐ → T			
10 × 6 = ☐ → F	2 × 7 = ☐ → B	2 × 1 = ☐ → K	7 × 7 = ☐ → R		
7 × 4 = ☐ → S	9 × 12 = ☐ → D	9 × 10 = ☐ → N			
3 × 7 = ☐ → I	3 × 9 = ☐ → H	11 × 6 = ☐ → U	7 × 5 = ☐ → L		

Scratch space:

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

> The team must share out the spare energy bars equally among the search squads.

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 ÷ 1 = ☐	60 ÷ 5 = ☐	70 ÷ 10 = ☐	12 ÷ 2 = ☐	30 ÷ 3 = ☐
110 ÷ 10 = ☐	48 ÷ 6 = ☐	33 ÷ 11 = ☐	8 ÷ 4 = ☐	12 ÷ 3 = ☐
45 ÷ 9 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain scaled the stone wall, then marked the escape path.
2. The villain soared over the gate, then unlocked the hidden chest.
3. The villain soared over the gate, then called the decoy owl.
4. The villain blocked the light beam, then unlocked the hidden chest.
5. The villain swung across the canyon, then distracted the camp guards.
6. The villain tracked the hidden signal, then marked the escape path.
7. The villain swung across the canyon, then marked the escape path.
8. The villain scaled the stone wall, then created a sudden fog.
9. The villain tracked the hidden signal, then distracted the camp guards.
10. The villain scaled the stone wall, then called the decoy owl.
11. The villain scaled the stone wall, then distracted the camp guards.
12. The villain blocked the light beam, then distracted the camp guards.

TEACHER / PARENT

Answer Key

The Case of the Missing Golden Compass

Culprit: Guide Gabe

Pocket Radar · Laser Pointer · Right Shoulder Strap · Dark Blue Hat · Shiny Mirrors

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN HAS NO SMOKE CAPSULE"

Round 2,142 to the nearest thousand = 2000 (T) · Round 7,624 to the nearest thousand = 8000 (V) · Round 20 to the nearest ten = 20 (O) · Round 5,088 to the nearest thousand = 5000 (H) · Round 30 to the nearest ten = 30 (L) · Round 613 to the nearest hundred = 600 (C) · Round 64 to the nearest ten = 60 (P) · Round 827 to the nearest hundred = 800 (I) · Round 2,917 to the nearest thousand = 3000 (N) · Round 52 to the nearest ten = 50 (U) · Round 463 to the nearest hundred = 500 (E) · Round 93 to the nearest ten = 90 (A) · Round 720 to the nearest hundred = 700 (M) · Round 908 to the nearest hundred = 900 (S) · Round 42 to the nearest ten = 40 (K)

Clue 2 (Addition): "A WITNESS SAW A STRAP ON THE RIGHT SHOULDER"

125 + 122 = 247 (A) · 181 + 269 = 450 (N) · 390 + 523 = 913 (P) · 343 + 214 = 557 (G) · 89 + 132 = 221 (W) · 354 + 212 = 566 (E) · 544 + 250 = 794 (U) · 380 + 284 = 664 (O) · 207 + 269 = 476 (T) · 510 + 235 = 745 (H) · 387 + 536 = 923 (D) · 159 + 281 = 440 (L) · 393 + 402 = 795 (S) · 441 + 418 = 859 (R) · 231 + 121 = 352 (I)

Clue 3 (Subtraction): "THE VILLAIN RAN AWAY FROM SHINY MIRRORS"

965 - 353 = 612 (T) · 1032 - 252 = 780 (O) · 1022 - 164 = 858 (M) · 649 - 226 = 423 (A) · 1039 - 198 = 841 (N) · 515 - 293 = 222 (F) · 611 - 307 = 304 (V) · 663 - 218 = 445 (W) · 692 - 281 = 411 (S) · 303 - 37 = 266 (R) · 1070 - 399 = 671 (L) · 1000 - 206 = 794 (Y) · 392 - 281 = 111 (H) · 533 - 254 = 279 (I) · 587 - 337 = 250 (E)

Clue 4 (Multiplication facts (1-12)): "WE FOUND FIBERS FROM A DARK BLUE HAT"

11 × 11 = 121 (W) · 7 × 11 = 77 (O) · 9 × 1 = 9 (M) · 1 × 12 = 12 (E) · 9 × 7 = 63 (A) · 11 × 10 = 110 (T) · 10 × 6 = 60 (F) · 2 × 7 = 14 (B) · 2 × 1 = 2 (K) · 7 × 7 = 49 (R) · 7 × 4 = 28 (S) · 9 × 12 = 108 (D) · 9 × 10 = 90 (N) · 3 × 7 = 21 (I) · 3 × 9 = 27 (H) · 11 × 6 = 66 (U) · 7 × 5 = 35 (L)

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

1 ÷ 1 = 1 · 60 ÷ 5 = 12 · 70 ÷ 10 = 7 · 12 ÷ 2 = 6 · 30 ÷ 3 = 10 · 110 ÷ 10 = 11 · 48 ÷ 6 = 8 · 33 ÷ 11 = 3 · 8 ÷ 4 = 2 · 12 ÷ 3 = 4 · 45 ÷ 9 = 5