The Case of the Missing Golden Compass

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

Detective: _____ **Date:** _____

Someone snuck into the expedition tent and snatched the Golden Compass! Solve the clues to identify the rogue explorer before the ship sails.

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.

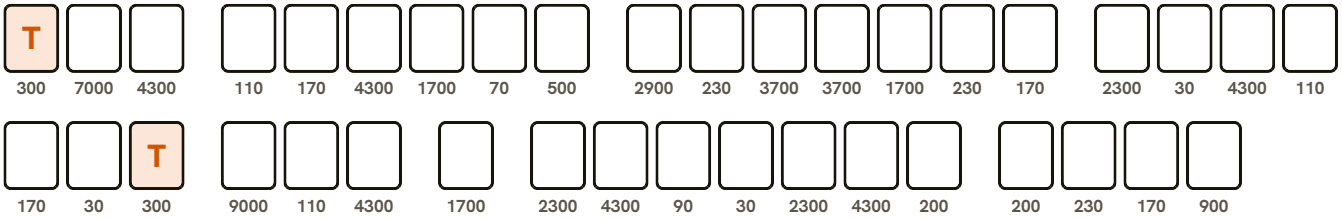
NAME	PRIMARY GEAR	SIDE ITEM	DOMINANT HAND	HEADWEAR	FEAR FACTOR
Yuri Gagarin	Grappling Hook	Torch	Left Handed	Bandana	Loud Whistles
Thor Heyerdahl	Brass Telescope	Torch	Right Handed	Captain Cap	Loud Whistles
Sacagawea	Grappling Hook	Golden Compass	Left Handed	Captain Cap	Squeaking Bats
Leif Erikson	Grappling Hook	Torch	Right Handed	Bandana	Loud Whistles
Ranulph Fiennes	Rope Launcher	Golden Compass	Right Handed	Captain Cap	Squeaking Bats
Nellie Bly	Smoke Bomb	Torch	Left Handed	Captain Cap	Squeaking Bats
Ibn Battuta	Rope Launcher	Canteen	Right Handed	Bandana	Loud Whistles
Steve Irwin	Brass Telescope	Canteen	Right Handed	Captain Cap	Squeaking Bats
Indiana Jones	Rope Launcher	Canteen	Left Handed	Captain Cap	Loud Whistles
Edmund Hillary	Signal Flare	Machete	Right Handed	Captain Cap	Loud Whistles
James Cook	Rope Launcher	Decoder Ring	Right Handed	Captain Cap	Squeaking Bats
Amelia Earhart	Brass Telescope	Canteen	Right Handed	Bandana	Squeaking Bats
Bear Grylls	Grappling Hook	Golden Compass	Left Handed	Pith Helmet	Squeaking Bats
Jacques Cousteau	Smoke Bomb	Golden Compass	Right Handed	Captain Cap	Squeaking Bats
Sylvia Earle	Smoke Bomb	Canteen	Right Handed	Captain Cap	Squeaking Bats
Jeanne Baret	Signal Flare	Torch	Right Handed	Pith Helmet	Squeaking Bats
Jack Sparrow	Smoke Bomb	Torch	Right Handed	Pith Helmet	Bright Flash
Hernan Cortes	Smoke Bomb	Decoder Ring	Right Handed	Bandana	Loud Whistles
Matthew Henson	Signal Flare	Golden Compass	Right Handed	Bandana	Bright Flash
David Livingstone	Grappling Hook	Canteen	Right Handed	Pith Helmet	Bright Flash
Marco Polo	Rope Launcher	Machete	Left Handed	Bandana	Loud Whistles

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CLUE 1 Rounding

The camp radar only shows rounded distance numbers, but rounding to the nearest ten reveals the first clue.

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



Round 318 to the nearest hundred ☐ → T

Round 28 to the nearest ten ☐ → O

Round 3,707 to the nearest hundred ☐ → L

Round 245 to the nearest hundred ☐ → R

Round 8,972 to the nearest thousand ☐ → U

Round 7,354 to the nearest thousand ☐ → H

Round 170 to the nearest ten ☐ → N

Round 2,856 to the nearest hundred ☐ → V

Round 230 to the nearest ten ☐ → I

Round 896 to the nearest hundred ☐ → G

Round 108 to the nearest ten ☐ → S

Round 1,743 to the nearest hundred ☐ → A

Round 489 to the nearest hundred ☐ → Y

Round 2,314 to the nearest hundred ☐ → D

Round 92 to the nearest ten ☐ → C

Round 4,293 to the nearest hundred ☐ → E

Round 69 to the nearest ten ☐ → K

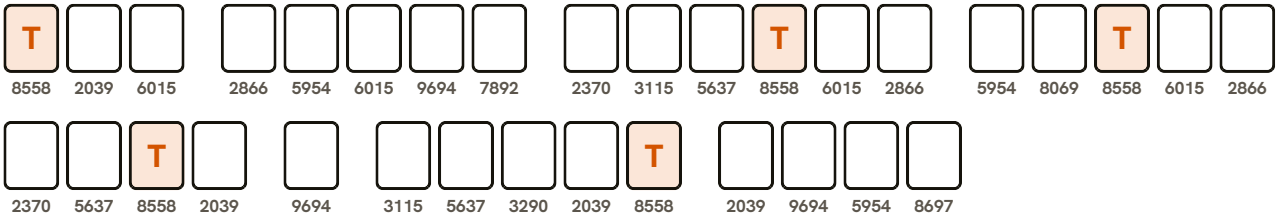
Scratch space:

CLUE 2

Addition

We gathered all the trail maps found in the jungle camp and added them up to find the next clue.

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



3441 + 5117 = ☐ → T

2756 + 3198 = ☐ → N

3914 + 1723 = ☐ → I

1220 + 819 = ☐ → H

1578 + 792 = ☐ → W

4469 + 4228 = ☐ → D

4192 + 1823 = ☐ → E

5223 + 2669 = ☐ → K

1576 + 1714 = ☐ → G

1016 + 1850 = ☐ → S

2840 + 5229 = ☐ → O

1011 + 2104 = ☐ → R

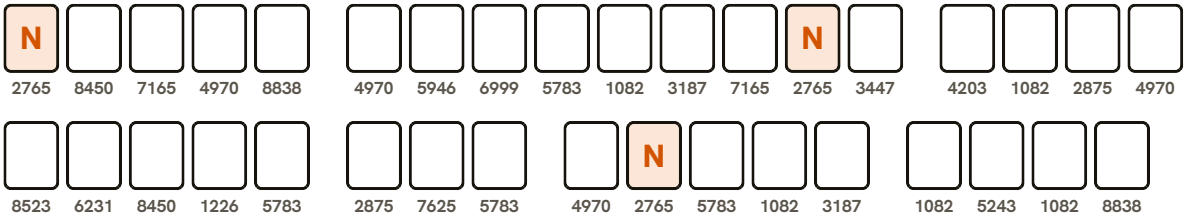
6051 + 3643 = ☐ → A

Scratch space:

CLUE 3 Subtraction

The crew checked how many supplies were left after subtracting lost gear, which led to a new clue.

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



3090 - 325 = ☐ → N

6814 - 3627 = ☐ → K

1913 - 687 = ☐ → V

10997 - 2474 = ☐ → D

6102 - 3227 = ☐ → T

7981 - 982 = ☐ → U

12036 - 4411 = ☐ → H

10570 - 1732 = ☐ → Y

9976 - 4030 = ☐ → Q

4986 - 783 = ☐ → B

8703 - 253 = ☐ → O

7803 - 1572 = ☐ → R

1597 - 515 = ☐ → A

5310 - 340 = ☐ → S

9673 - 3890 = ☐ → E

8043 - 878 = ☐ → I

8046 - 2803 = ☐ → W

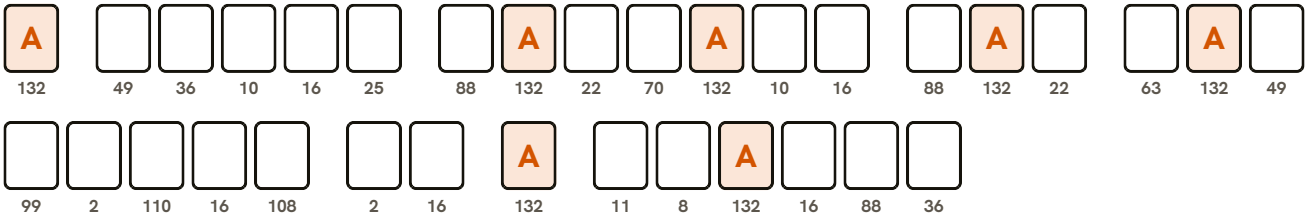
4245 - 798 = ☐ → G

Scratch space:

CLUE 4 Multiplication facts (1-12)

We counted the total supplies packed in equal crates, using multiplication to uncover the clue.

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



12 × 11 = ☐ → A

2 × 11 = ☐ → P

1 × 8 = ☐ → R

7 × 7 = ☐ → S

5 × 5 = ☐ → Y

9 × 11 = ☐ → F

11 × 1 = ☐ → B

8 × 2 = ☐ → N

8 × 11 = ☐ → C

9 × 7 = ☐ → W

1 × 10 = ☐ → I

2 × 1 = ☐ → O

10 × 7 = ☐ → T

12 × 3 = ☐ → H

11 × 10 = ☐ → U

12 × 9 = ☐ → D

Scratch space:

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

> The team split the total gold coins equally among the search squads, using division to unlock the last clue.

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:

40 ÷ 8 = ☐ | 12 ÷ 4 = ☐ | 30 ÷ 5 = ☐ | 42 ÷ 6 = ☐ | 10 ÷ 1 = ☐

132 ÷ 11 = ☐ | 5 ÷ 5 = ☐ | 22 ÷ 2 = ☐ | 44 ÷ 11 = ☐ | 8 ÷ 4 = ☐

88 ÷ 11 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain fired a rope launcher, then unlocked a secret code.
2. The villain threw a sudden smoke bomb, then lit the path with a torch.
3. The villain threw a sudden smoke bomb, then took a drink from a canteen.
4. The villain spotted clues with a brass telescope, then checked the golden compass.
5. The villain spotted clues with a brass telescope, then took a drink from a canteen.
6. The villain fired a rope launcher, then checked the golden compass.
7. The villain swung across with a grappling hook, then took a drink from a canteen.
8. The villain swung across with a grappling hook, then lit the path with a torch.
9. The villain threw a sudden smoke bomb, then checked the golden compass.
10. The villain spotted clues with a brass telescope, then lit the path with a torch.
11. The villain threw a sudden smoke bomb, then unlocked a secret code.
12. The villain fired a rope launcher, then took a drink from a canteen.

TEACHER / PARENT

Answer Key

The Case of the Missing Golden Compass

Culprit: Jacques Cousteau

Smoke Bomb · Golden Compass · Right Handed · Captain Cap · Squeaking Bats

Trail: Start 21 → Clue 1 19 → Clue 2 13 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SNEAKY VILLAIN DOES NOT USE A DECODER RING"

Round 318 to the nearest hundred = 300 (T) · Round 28 to the nearest ten = 30 (O) · Round 3,707 to the nearest hundred = 3700 (L) · Round 245 to the nearest hundred = 200 (R) · Round 8,972 to the nearest thousand = 9000 (U) · Round 7,354 to the nearest thousand = 7000 (H) · Round 170 to the nearest ten = 170 (N) · Round 2,856 to the nearest hundred = 2900 (V) · Round 230 to the nearest ten = 230 (I) · Round 896 to the nearest hundred = 900 (G) · Round 108 to the nearest ten = 110 (S) · Round 1,743 to the nearest hundred = 1700 (A) · Round 489 to the nearest hundred = 500 (Y) · Round 2,314 to the nearest hundred = 2300 (D) · Round 92 to the nearest ten = 90 (C) · Round 4,293 to the nearest hundred = 4300 (E) · Round 69 to the nearest ten = 70 (K)

Clue 2 (Addition): "THE SNEAK WRITES NOTES WITH A RIGHT HAND"

3441 + 5117 = 8558 (T) · 2756 + 3198 = 5954 (N) · 3914 + 1723 = 5637 (I) · 1220 + 819 = 2039 (H) · 1578 + 792 = 2370 (W) · 4469 + 4228 = 8697 (D) · 4192 + 1823 = 6015 (E) · 5223 + 2669 = 7892 (K) · 1576 + 1714 = 3290 (G) · 1016 + 1850 = 2866 (S) · 2840 + 5229 = 8069 (O) · 1011 + 2104 = 3115 (R) · 6051 + 3643 = 9694 (A)

Clue 3 (Subtraction): "NOISY SQUEAKING BATS DROVE THE SNEAK AWAY"

3090 - 325 = 2765 (N) · 6814 - 3627 = 3187 (K) · 1913 - 687 = 1226 (V) · 10997 - 2474 = 8523 (D) · 6102 - 3227 = 2875 (T) · 7981 - 982 = 6999 (U) · 12036 - 4411 = 7625 (H) · 10570 - 1732 = 8838 (Y) · 9976 - 4030 = 5946 (Q) · 4986 - 783 = 4203 (B) · 8703 - 253 = 8450 (O) · 7803 - 1572 = 6231 (R) · 1597 - 515 = 1082 (A) · 5310 - 340 = 4970 (S) · 9673 - 3890 = 5783 (E) · 8043 - 878 = 7165 (I) · 8046 - 2803 = 5243 (W) · 4245 - 798 = 3447 (G)

Clue 4 (Multiplication facts (1-12)): "A SHINY CAPTAIN CAP WAS FOUND ON A BRANCH"

12 × 11 = 132 (A) · 2 × 11 = 22 (P) · 1 × 8 = 8 (R) · 7 × 7 = 49 (S) · 5 × 5 = 25 (Y) · 9 × 11 = 99 (F) · 11 × 1 = 11 (B) · 8 × 2 = 16 (N) · 8 × 11 = 88 (C) · 9 × 7 = 63 (W) · 1 × 10 = 10 (I) · 2 × 1 = 2 (O) · 10 × 7 = 70 (T) · 12 × 3 = 36 (H) · 11 × 10 = 110 (U) · 12 × 9 = 108 (D)

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

40 ÷ 8 = 5 · 12 ÷ 4 = 3 · 30 ÷ 5 = 6 · 42 ÷ 6 = 7 · 10 ÷ 1 = 10 · 132 ÷ 11 = 12 · 5 ÷ 5 = 1 · 22 ÷ 2 = 11 · 44 ÷ 11 = 4 · 8 ÷ 4 = 2 · 88 ÷ 11 = 8