



The Mystery of the Golden Compass

Grade 4 math · Multiplication, Skip counting, Word problems, Rounding, Division · Reading level grades 3-4

Detective: _____ Date: _____

The ancient golden compass has disappeared from Jungle Explorer Camp. Someone snuck into the Head Navigator tent at night and swiped it. Uncover the clues to find the thief before the morning expedition begins.

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 Treasure Thief is _____

Possible suspects

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

NAME	JUNGLE GEAR	EXPLORER GADGET	STRAP STYLE	HAT COLOR	SCARED OF
Captain Jack	Smoke Bomb	Brass Spyglass	Right Shoulder Strap	Green Helmet	Loud Parrots
Hiker Eli	Smoke Bomb	Signal Whistle	Right Shoulder Strap	Green Helmet	Mud Traps
Tracker Cole	Climbing Spikes	Pocket Compass	Right Shoulder Strap	Yellow Cap	Buzzing Bees
Climber Ava	Machete Tool	Glow Lantern	Right Shoulder Strap	Green Helmet	Loud Parrots
Scout Ella	Climbing Spikes	Glow Lantern	Left Shoulder Strap	Green Helmet	Mud Traps
Pilot Ivy	Smoke Bomb	Glow Lantern	Left Shoulder Strap	Brown Fedora	Buzzing Bees
Hunter Owen	Smoke Bomb	Signal Whistle	Right Shoulder Strap	Green Helmet	Buzzing Bees
Hiker Nora	Smoke Bomb	Brass Spyglass	Right Shoulder Strap	Green Helmet	Mud Traps
Camper Luke	Climbing Spikes	Brass Spyglass	Right Shoulder Strap	Green Helmet	Mud Traps
Rover Mia	Climbing Spikes	Map Cylinder	Right Shoulder Strap	Yellow Cap	Loud Parrots
Diver Kai	Climbing Spikes	Pocket Compass	Right Shoulder Strap	Green Helmet	Mud Traps
Fisher Lily	Grappling Hook	Pocket Compass	Right Shoulder Strap	Green Helmet	Mud Traps
Tracker Nina	Smoke Bomb	Glow Lantern	Right Shoulder Strap	Brown Fedora	Mud Traps
Scout Sam	Rope Ladder	Pocket Compass	Right Shoulder Strap	Brown Fedora	Buzzing Bees
Diver Zoe	Smoke Bomb	Signal Whistle	Right Shoulder Strap	Brown Fedora	Mud Traps
Explorer Maya	Grappling Hook	Signal Whistle	Right Shoulder Strap	Yellow Cap	Mud Traps
Ranger Leo	Grappling Hook	Signal Whistle	Right Shoulder Strap	Green Helmet	Mud Traps
Pilot Chloe	Machete Tool	Glow Lantern	Left Shoulder Strap	Green Helmet	Mud Traps
Trekker Noah	Smoke Bomb	Glow Lantern	Right Shoulder Strap	Green Helmet	Loud Parrots
Guide Ben	Machete Tool	Glow Lantern	Right Shoulder Strap	Brown Fedora	Mud Traps
Rover Liam	Machete Tool	Brass Spyglass	Left Shoulder Strap	Green Helmet	Mud Traps

CLUE 1

Multiplication facts (1-12)

To count the rows of supplies in the expedition tent, solve this multiplication problem.

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

T																T		
4	108	6	2	8	100	100	3	8	45	33	35	6	66	45	35	4		
12	3	55	55	21	3	14	55	3	66	66	66	96	21	56	100	3	66	66

$2 \times 2 = \square \rightarrow \text{[T]}$

$7 \times 3 = \square \rightarrow \text{[Y]}$

$3 \times 4 = \square \rightarrow \text{[C]}$

$8 \times 12 = \square \rightarrow \text{[P]}$

$7 \times 2 = \square \rightarrow \text{[B]}$

$1 \times 8 = \square \rightarrow \text{[I]}$

$12 \times 9 = \square \rightarrow \text{[H]}$

$5 \times 11 = \square \rightarrow \text{[R]}$

$10 \times 10 = \square \rightarrow \text{[L]}$

$1 \times 2 = \square \rightarrow \text{[V]}$

$1 \times 3 = \square \rightarrow \text{[A]}$

$7 \times 5 = \square \rightarrow \text{[O]}$

$7 \times 8 = \square \rightarrow \text{[G]}$

$6 \times 11 = \square \rightarrow \text{[S]}$

$3 \times 2 = \square \rightarrow \text{[E]}$

$3 \times 11 = \square \rightarrow \text{[D]}$

$9 \times 5 = \square \rightarrow \text{[N]}$

Scratch space:

CLUE 2 Skip counting

To follow the trail of wooden stakes along the river, skip count to find the next mark.

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

T									T								
21	42	100	8	36	8	27	100	120	21	40	100	14	110	8	14		
				T										T			
110	60	22	42	21	8	42	140	36	9	70	100	110	8	21	110	14	27

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 → **T**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **E**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 → **H**

Skip-count by 10s. Fill the blank: 10, 20, 30, __, 50, 60 → **W**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 → **U**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 → **A**

Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 → **L**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 → **G**

Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 → **S**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **P**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 → **D**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 → **O**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 → **I**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 → **R**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 → **C**

Scratch space:

Word problems

Solve each problem, then write its letter in the boxes to fill in the missing word.

M							S
47	8	70	80	43	20	68	

Answer: → **M**

Answer: → **A**

Answer: → **T**

Answer: → **U**

Answer: → **D**

Answer: → **P**

Answer: → **R**

make your own at mathcrackers.com

CLUE 4

Rounding

The digital scout sensor shows rounded numbers on its screen.

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

A																			
900	70	290	1300	1300	7000	370	1300	2300	9000	1300	200	130	900	5000					

								A						
1100	50	300	7000	700	7000	1300	900	290	200	370	1300			

200	290	1300	1300	370	50	300	5000	1300	

Round 937 to the nearest hundred → **A**

Round 48 to the nearest ten → **O**

Round 67 to the nearest ten → **G**

Round 128 to the nearest ten → **W**

Round 238 to the nearest hundred → **T**

Round 2,292 to the nearest hundred → **L**

Round 369 to the nearest ten → **H**

Round 9,432 to the nearest thousand → **M**

Round 1,330 to the nearest hundred → **E**

Round 660 to the nearest hundred → **D**

Round 7,160 to the nearest thousand → **N**

Round 290 to the nearest ten → **R**

Round 1,088 to the nearest hundred → **F**

Round 5,429 to the nearest thousand → **S**

Round 316 to the nearest hundred → **U**

Scratch space:

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

To split the camp gear equally among the explorer squads, solve this division problem.

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:

$21 \div 7 = \boxed{}$

$54 \div 9 = \boxed{}$

$8 \div 8 = \boxed{}$

$66 \div 6 = \boxed{}$

$24 \div 12 = \boxed{}$

$4 \div 1 = \boxed{}$

$40 \div 5 = \boxed{}$

$27 \div 3 = \boxed{}$

$25 \div 5 = \boxed{}$

$70 \div 10 = \boxed{}$

$24 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain swung across the canyon with a grappling hook, then alerted nearby monkeys with a signal whistle.
2. The villain cleared the thick vines with a machete tool, then lit up the hidden cave with a glow lantern.
3. The villain swung across the canyon with a grappling hook, then checked the ancient path with a pocket compass.
4. The villain vanished into the brush with a smoke bomb, then checked the ancient path with a pocket compass.
5. The villain vanished into the brush with a smoke bomb, then scouted the distant river with a brass spyglass.
6. The villain vanished into the brush with a smoke bomb, then alerted nearby monkeys with a signal whistle.
7. The villain scaled the tall wall using a rope ladder, then alerted nearby monkeys with a signal whistle.
8. The villain swung across the canyon with a grappling hook, then scouted the distant river with a brass spyglass.
9. The villain cleared the thick vines with a machete tool, then checked the ancient path with a pocket compass.
10. The villain climbed the slippery ridge using climbing spikes, then checked the ancient path with a pocket compass.
11. The villain scaled the tall wall using a rope ladder, then scouted the distant river with a brass spyglass.
12. The villain scaled the tall wall using a rope ladder, then stashed the golden map inside a map cylinder.

Answer Key

The Mystery of the Golden Compass

Culprit: Diver Kai

Climbing Spikes · Pocket Compass · Right Shoulder Strap · Green Helmet · Mud Traps

Trail: Start 21 → Clue 1 17 → Clue 2 14 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT CARRY A BRASS SPYGLASS"

$2 \times 2 = 4$ (T) · $7 \times 3 = 21$ (Y) · $3 \times 4 = 12$ (C) · $8 \times 12 = 96$ (P) · $7 \times 2 = 14$ (B) · $1 \times 8 = 8$ (I) · $12 \times 9 = 108$ (H) · $5 \times 11 = 55$ (R) · $10 \times 10 = 100$ (L) · $1 \times 2 = 2$ (V) · $1 \times 3 = 3$ (A) · $7 \times 5 = 35$ (O) · $7 \times 8 = 56$ (G) · $6 \times 11 = 66$ (S) · $3 \times 2 = 6$ (E) · $3 \times 11 = 33$ (D) · $9 \times 5 = 45$ (N)

Clue 2 (Skip counting): "THE SUSPECT WEARS A RIGHT SHOULDER STRAP"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, __, 24, 27 = 21 (T) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, __, 45, 48 = 42 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, __, 50, 60 = 40 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, __, 39, 42 = 36 (U) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (A) · Skip-count by 3s. Fill the blank: 3, 6, __, 12, 15 = 9 (L) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, __, 24, 26 = 22 (G) · Skip-count by 2s. Fill the blank: 2, 4, 6, __, 10, 12 = 8 (S) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (P) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, __, 80, 90 = 70 (D) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, __, 150, 160 = 140 (O) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, __, 70, 80 = 60 (I) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (R) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, __, 130, 140 = 120 (C)

Clue 3 (Word problems): "MUD TRAPS"

There were 65 compasses. 18 were used up. How many compasses are left? = 47 (M) · Ranger lined up 10 rows of 2 expedition maps. How many expedition maps in all? = 20 (A) · There were 103 climbing ropes. 23 were used up. How many climbing ropes are left? = 80 (T) · Ranger found 3 lantern batteries yesterday and 5 more today. How many lantern batteries in all? = 8 (U) · Ranger lined up 7 rows of 10 expedition maps. How many expedition maps in all? = 70 (D) · Ranger found 14 lantern batteries yesterday and 54 more today. How many lantern batteries in all? = 68 (P) · There were 48 compasses. 5 were used up. How many compasses are left? = 43 (R)

Clue 4 (Rounding): "A GREEN HELMET WAS FOUND NEAR THE TREEHOUSE"

Round 937 to the nearest hundred = 900 (A) · Round 48 to the nearest ten = 50 (O) · Round 67 to the nearest ten = 70 (G) · Round 128 to the nearest ten = 130 (W) · Round 238 to the nearest hundred = 200 (T) · Round 2,292 to the nearest hundred = 2300 (L) · Round 369 to the nearest ten = 370 (H) · Round 9,432 to the nearest thousand = 9000 (M) · Round 1,330 to the nearest hundred = 1300 (E) · Round 660 to the nearest hundred = 700 (D) · Round 7,160 to the nearest thousand = 7000 (N) · Round 290 to the nearest ten = 290 (R) · Round 1,088 to the nearest hundred = 1100 (F) · Round 5,429 to the nearest thousand = 5000 (S) · Round 316 to the nearest hundred = 300 (U)

Clue 5 (Division facts (1-12)): surviving statement is box 10 → Diver Kai

$21 \div 7 = 3$ · $54 \div 9 = 6$ · $8 \div 8 = 1$ · $66 \div 6 = 11$ · $24 \div 12 = 2$ · $4 \div 1 = 4$ · $40 \div 5 = 8$ · $27 \div 3 = 9$ · $25 \div 5 = 5$ · $70 \div 10 = 7$ · $24 \div 2 = 12$