



The Lost Compass Mystery

Grade 7 math · Multiplication, Subtraction, Addition, Place value, Two-step equations · Reading level grades 3-4

Detective: _____ Date: _____

Someone snuck into Jungle Camp Alpha and snatched the Golden Compass from the Chief Expeditioner! Use your math skills to eliminate suspects and find the camp bandit.

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 camp bandit is _____

Possible suspects

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

NAME	MAIN GEAR	EXTRA TOOL	HABIT	HAIR STYLE	FOILED BY
Trekker Luke	Grappling Hook	Binoculars	Taps Left Foot	Spiky Black	Flash Bomb
Pilot Nina	Grappling Hook	Matchbox	Taps Right Foot	Spiky Black	Net Snare
Hunter Ivy	Jungle Machete	Binoculars	Taps Left Foot	Curly Brown	Net Snare
Rover Dan	Grappling Hook	Walkie Talkie	Taps Right Foot	Braided Red	Net Snare
Tracker Sam	Pocket Drone	Rope Coil	Taps Left Foot	Spiky Black	Net Snare
Surveyor Owen	Signal Flare	Rope Coil	Taps Right Foot	Braided Red	Flash Bomb
Veteran Ruth	Jungle Machete	Matchbox	Taps Right Foot	Braided Red	Net Snare
Ranger Jack	Jungle Machete	Binoculars	Taps Left Foot	Curly Brown	Mud Trap
Pathfinder Ava	Grappling Hook	Rope Coil	Taps Right Foot	Braided Red	Net Snare
Dr Kai	Jungle Machete	Matchbox	Taps Left Foot	Curly Brown	Flash Bomb
Adventurer Chloe	Map Compass	Flashlight	Taps Left Foot	Curly Brown	Mud Trap
Pioneer Noah	Grappling Hook	Walkie Talkie	Taps Left Foot	Braided Red	Net Snare
Wilderness Jade	Map Compass	Rope Coil	Taps Right Foot	Curly Brown	Flash Bomb
Navigator Mia	Pocket Drone	Binoculars	Taps Right Foot	Braided Red	Net Snare
Officer Zoe	Jungle Machete	Rope Coil	Taps Right Foot	Spiky Black	Net Snare
Captain Leo	Pocket Drone	Rope Coil	Taps Right Foot	Braided Red	Net Snare
Rookie Cole	Signal Flare	Rope Coil	Taps Left Foot	Spiky Black	Net Snare
Guide Ben	Grappling Hook	Rope Coil	Taps Right Foot	Curly Brown	Flash Bomb
Outrider Ian	Grappling Hook	Flashlight	Taps Right Foot	Spiky Black	Mud Trap
Professor Amy	Jungle Machete	Walkie Talkie	Taps Left Foot	Braided Red	Net Snare
Agent Max	Map Compass	Flashlight	Taps Left Foot	Spiky Black	Flash Bomb

CLUE 1
Multiplication facts (1-12)

To count the supplies packed in equal crates, you need to do multiplication.

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

T																			
44	88	120	144	12	120	63	121	110	11	63	12	3	10	44	3	35	120	144	
		T																	
12	35	44	28	63	81	81	110	11	10	12	35	28	33	14	63	81	144		

$4 \times 11 = \square \rightarrow$

T

$9 \times 9 = \square \rightarrow$

R

$7 \times 4 = \square \rightarrow$

C

$9 \times 7 = \square \rightarrow$

A

$12 \times 10 = \square \rightarrow$

E

$12 \times 12 = \square \rightarrow$

S

$7 \times 2 = \square \rightarrow$

L

$11 \times 3 = \square \rightarrow$

U

$10 \times 1 = \square \rightarrow$

I

$1 \times 3 = \square \rightarrow$

D

$11 \times 1 = \square \rightarrow$

B

$8 \times 11 = \square \rightarrow$

H

$7 \times 5 = \square \rightarrow$

O

$11 \times 10 = \square \rightarrow$

Y

$6 \times 2 = \square \rightarrow$

N

$11 \times 11 = \square \rightarrow$

K

Scratch space:

CLUE 2
Subtraction

To find out how many supply crates are left after the raid, subtract the lost items.

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

A									A					
5045	2494	2034	7823	3263	5125	7560	7560	7560	5045	2494	7823	1092	5125	

	A						A											
5792	5045	3263	4224	2034	7823	7823	5045	7819	7823	1092	5125	2034	2084	2084	2034	6241	1092	7823

7333	4849	4849	7823

$6428 - 1383 = \square \rightarrow \text{A}$	$6961 - 720 = \square \rightarrow \text{G}$	$10339 - 2516 = \square \rightarrow \text{T}$
$5027 - 2943 = \square \rightarrow \text{R}$	$9413 - 1853 = \square \rightarrow \text{S}$	$3395 - 132 = \square \rightarrow \text{N}$
$10341 - 4549 = \square \rightarrow \text{B}$	$8337 - 518 = \square \rightarrow \text{P}$	$4530 - 2496 = \square \rightarrow \text{I}$
$4968 - 119 = \square \rightarrow \text{O}$	$5314 - 4222 = \square \rightarrow \text{H}$	$5764 - 3270 = \square \rightarrow \text{W}$
$6679 - 2455 = \square \rightarrow \text{D}$	$8332 - 3207 = \square \rightarrow \text{E}$	$9568 - 2235 = \square \rightarrow \text{F}$

Scratch space:

CLUE 3
Addition

To total up all the clues gathered from the north and south trails, add them together.

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

T 6009	6581	3883	6581	3883	3350	2787	5285	T 6009	2787	5979	5979	3883	2121	T 6009	6581	3883
7721	6647	4900	4900	9897	6647	6953	6088	6647	T 6009	6581	9897	6953	3883	T 6009		
5285	6953	9897	3350	3883												

$1924 + 4085 = \boxed{} \rightarrow \boxed{\text{T}}$

$3646 + 3307 = \boxed{} \rightarrow \boxed{\text{N}}$

$3693 + 2395 = \boxed{} \rightarrow \boxed{\text{W}}$

$656 + 1465 = \boxed{} \rightarrow \boxed{\text{D}}$

$1417 + 1370 = \boxed{} \rightarrow \boxed{\text{O}}$

$2248 + 1102 = \boxed{} \rightarrow \boxed{\text{R}}$

$3240 + 2739 = \boxed{} \rightarrow \boxed{\text{P}}$

$2672 + 2613 = \boxed{} \rightarrow \boxed{\text{S}}$

$4138 + 2443 = \boxed{} \rightarrow \boxed{\text{H}}$

$2082 + 1801 = \boxed{} \rightarrow \boxed{\text{E}}$

$4197 + 3524 = \boxed{} \rightarrow \boxed{\text{V}}$

$3057 + 1843 = \boxed{} \rightarrow \boxed{\text{L}}$

$3396 + 3251 = \boxed{} \rightarrow \boxed{\text{I}}$

$4622 + 5275 = \boxed{} \rightarrow \boxed{\text{A}}$

Scratch space:

CLUE 4 Place value

The digital lock on the temple gate needs a place value code to open.

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

T					T			T									
80	200	600	2000	600	80	600	40	80	50	10	600	20	90	6000	60	2000	
																T	
900	500	5000	50	2000	600	2000	500	600	2000	200	5000	50	500	5000	80		
40	5000	30	400														

What is the value of the 8 in 23,382? → **T**

What is the value of the 2 in 677,204? → **H**

What is the value of the 5 in 272,652? → **I**

What is the value of the 2 in 82,158? → **D**

What is the value of the 5 in 25,812? → **A**

What is the value of the 9 in 34,591? → **O**

What is the value of the 5 in 608,512? → **R**

What is the value of the 2 in 77,925? → **F**

What is the value of the 9 in 425,917? → **B**

What is the value of the 6 in 36,445? → **U**

What is the value of the 4 in 238,541? → **C**

What is the value of the 6 in 14,652? → **E**

What is the value of the 6 in 85,067? → **N**

What is the value of the 4 in 50,409? → **P**

What is the value of the 1 in 358,518? → **V**

What is the value of the 3 in 87,736? → **M**

Scratch space:

CLUE 5**Two-step equations - the last clue**

To figure out the total weight of gear across two teams, solve this two step equation.

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:

$5x + 4 = 54, x = \boxed{}$

$5x + 1 = 26, x = \boxed{}$

$3x + 3 = 15, x = \boxed{}$

$4x + 7 = 31, x = \boxed{}$

$5x + 3 = 48, x = \boxed{}$

$5x + 9 = 19, x = \boxed{}$

$2x + 5 = 27, x = \boxed{}$

$3x + 1 = 37, x = \boxed{}$

$3x + 12 = 15, x = \boxed{}$

$3x + 12 = 33, x = \boxed{}$

$5x + 1 = 41, x = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain used a grappling hook to escape, then shone a flashlight down the path.
2. The villain fired a signal flare into the sky, then shone a flashlight down the path.
3. The villain used a grappling hook to escape, then unraveled a rope coil.
4. The villain used a grappling hook to escape, then spoke into a walkie talkie.
5. The villain launched a pocket drone overhead, then unraveled a rope coil.
6. The villain launched a pocket drone overhead, then looked through binoculars.
7. The villain used a grappling hook to escape, then looked through binoculars.
8. The villain launched a pocket drone overhead, then shone a flashlight down the path.
9. The villain launched a pocket drone overhead, then struck a matchbox for light.
10. The villain swung a jungle machete through vines, then struck a matchbox for light.
11. The villain checked a map compass for directions, then struck a matchbox for light.
12. The villain swung a jungle machete through vines, then shone a flashlight down the path.

Answer Key

The Lost Compass Mystery

Culprit: Pathfinder Ava

Grappling Hook · Rope Coil · Taps Right Foot · Braided Red · Net Snare

Trail: Start 21 → Clue 1 17 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SNEAKY BANDIT DOES NOT CARRY BINOCULARS"

$4 \times 11 = 44$ (T) · $9 \times 9 = 81$ (R) · $7 \times 4 = 28$ (C) · $9 \times 7 = 63$ (A) · $12 \times 10 = 120$ (E) · $12 \times 12 = 144$ (S) · $7 \times 2 = 14$ (L) · $11 \times 3 = 33$ (U) · $10 \times 1 = 10$ (I) · $1 \times 3 = 3$ (D) · $11 \times 1 = 11$ (B) · $8 \times 11 = 88$ (H) · $7 \times 5 = 35$ (O) · $11 \times 10 = 110$ (Y) · $6 \times 2 = 12$ (N) · $11 \times 11 = 121$ (K)

Clue 2 (Subtraction): "A WITNESS SAW THE BANDIT TAP THEIR RIGHT FOOT"

$6428 - 1383 = 5045$ (A) · $6961 - 720 = 6241$ (G) · $10339 - 2516 = 7823$ (T) · $5027 - 2943 = 2084$ (R) · $9413 - 1853 = 7560$ (S) · $3395 - 132 = 3263$ (N) · $10341 - 4549 = 5792$ (B) · $8337 - 518 = 7819$ (P) · $4530 - 2496 = 2034$ (I) · $4968 - 119 = 4849$ (O) · $5314 - 4222 = 1092$ (H) · $5764 - 3270 = 2494$ (W) · $6679 - 2455 = 4224$ (D) · $8332 - 3207 = 5125$ (E) · $9568 - 2235 = 7333$ (F)

Clue 3 (Addition): "THE HERO STOPPED THE VILLAIN WITH A NET SNARE"

$1924 + 4085 = 6009$ (T) · $3646 + 3307 = 6953$ (N) · $3693 + 2395 = 6088$ (W) · $656 + 1465 = 2121$ (D) · $1417 + 1370 = 2787$ (O) · $2248 + 1102 = 3350$ (R) · $3240 + 2739 = 5979$ (P) · $2672 + 2613 = 5285$ (S) · $4138 + 2443 = 6581$ (H) · $2082 + 1801 = 3883$ (E) · $4197 + 3524 = 7721$ (V) · $3057 + 1843 = 4900$ (L) · $3396 + 3251 = 6647$ (I) · $4622 + 5275 = 9897$ (A)

Clue 4 (Place value): "THE DETECTIVE FOUND BRAIDED RED HAIR AT CAMP"

What is the value of the 8 in 23,382? = 80 (T) · What is the value of the 2 in 677,204? = 200 (H) · What is the value of the 5 in 272,652? = 50 (I) · What is the value of the 2 in 82,158? = 2000 (D) · What is the value of the 5 in 25,812? = 5000 (A) · What is the value of the 9 in 34,591? = 90 (O) · What is the value of the 5 in 608,512? = 500 (R) · What is the value of the 2 in 77,925? = 20 (F) · What is the value of the 9 in 425,917? = 900 (B) · What is the value of the 6 in 36,445? = 6000 (U) · What is the value of the 4 in 238,541? = 40 (C) · What is the value of the 6 in 14,652? = 600 (E) · What is the value of the 6 in 85,067? = 60 (N) · What is the value of the 4 in 50,409? = 400 (P) · What is the value of the 1 in 358,518? = 10 (V) · What is the value of the 3 in 87,736? = 30 (M)

Clue 5 (Two-step equations): surviving statement is box 3 → Pathfinder Ava

$5x + 4 = 54, x = 10$ · $5x + 1 = 26, x = 5$ · $3x + 3 = 15, x = 4$ · $4x + 7 = 31, x = 6$ · $5x + 3 = 48, x = 9$ · $5x + 9 = 19, x = 2$ · $2x + 5 = 27, x = 11$ · $3x + 1 = 37, x = 12$ · $3x + 12 = 15, x = 1$ · $3x + 12 = 33, x = 7$ · $5x + 1 = 41, x = 8$