



The Pineapple Cove Caper

Grade 5 math · Fractions of a number, Multi-step word problems, Bar models, Order of operations, Division · Reading level grades 3-4

Detective: _____ Date: _____

Someone has stolen the legendary Golden Pineapple from the high-security vault! Patrol Chief Barnaby was locked in a closet. We must search the tropical island, solve the clues, and find out which secret agent went rogue.

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 The Rogue Agent is _____

Possible suspects

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

NAME	MAIN GADGET	BACKUP GEAR	STANCE	HAIR COLOR	WEAKNESS
Agent Zara	water jetpack	net launcher	right handed stance	sandy blonde hair	salty snacks
Agent Vera	stealth glider	net launcher	right handed stance	seaweed green hair	bright flashlights
Agent Maya	high-tech lasso	sonar goggles	right handed stance	coconut brown hair	salty snacks
Agent Skye	grappling hook	net launcher	left handed stance	coconut brown hair	salty snacks
Agent Remy	grappling hook	laser pointer	left handed stance	coconut brown hair	loud whistles
Agent Pip	high-tech lasso	net launcher	right handed stance	seaweed green hair	loud whistles
Agent Penny	stealth glider	net launcher	right handed stance	seaweed green hair	salty snacks
Agent Otto	turbo surfboard	decoy flares	right handed stance	seaweed green hair	loud whistles
Agent Kira	grappling hook	smoke bombs	left handed stance	seaweed green hair	bright flashlights
Agent Elsa	high-tech lasso	sonar goggles	right handed stance	seaweed green hair	loud whistles
Agent Felix	turbo surfboard	smoke bombs	right handed stance	sandy blonde hair	loud whistles
Agent Brody	high-tech lasso	smoke bombs	right handed stance	seaweed green hair	salty snacks
Agent Opal	water jetpack	smoke bombs	right handed stance	coconut brown hair	loud whistles
Agent Grace	turbo surfboard	laser pointer	right handed stance	sandy blonde hair	salty snacks
Agent Toby	grappling hook	smoke bombs	right handed stance	coconut brown hair	bright flashlights
Agent Dexter	water jetpack	net launcher	right handed stance	coconut brown hair	salty snacks
Agent Zack	turbo surfboard	laser pointer	right handed stance	coconut brown hair	loud whistles
Agent Leo	stealth glider	net launcher	left handed stance	sandy blonde hair	bright flashlights
Agent Ivy	grappling hook	sonar goggles	right handed stance	seaweed green hair	loud whistles
Agent Cleo	water jetpack	smoke bombs	left handed stance	seaweed green hair	loud whistles
Agent Jax	stealth glider	laser pointer	right handed stance	seaweed green hair	loud whistles

CLUE 1
Fractions of a number

To find the thief, we must compare the weight of our gear crates. A bar model will help us see who carried more.

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

T																T
18	40	12	21	7	15	15	5	7	38	13	10	12	3	38	10	18
			T					T								
28	3	12	18	40	12	38	12	18	15	5	28	38	4	40	12	8

$6/8 \text{ of } 24 = \square \rightarrow \boxed{\text{T}}$

$1/5 \text{ of } 105 = \square \rightarrow \boxed{\text{V}}$

$1/8 \text{ of } 104 = \square \rightarrow \boxed{\text{D}}$

$4/6 \text{ of } 57 = \square \rightarrow \boxed{\text{N}}$

$5/10 \text{ of } 10 = \square \rightarrow \boxed{\text{A}}$

$3/10 \text{ of } 50 = \square \rightarrow \boxed{\text{L}}$

$5/10 \text{ of } 14 = \square \rightarrow \boxed{\text{I}}$

$5/10 \text{ of } 16 = \square \rightarrow \boxed{\text{R}}$

$2/6 \text{ of } 12 = \square \rightarrow \boxed{\text{C}}$

$2/8 \text{ of } 112 = \square \rightarrow \boxed{\text{U}}$

$2/10 \text{ of } 200 = \square \rightarrow \boxed{\text{H}}$

$6/8 \text{ of } 16 = \square \rightarrow \boxed{\text{E}}$

$2/10 \text{ of } 50 = \square \rightarrow \boxed{\text{O}}$

$1/6 \text{ of } 18 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

CLUE 2

Multi-step word problems

The runaway agent dropped a trail of gadgets. We have to count the total energy cells they used in three secret stops.

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

A witness saw the villain was

R D E D S C E .
 52 71 55 88 43 88 49 65 43 49 65

Junior agent earned 3 coconut muffin in each of 2 rounds, plus 59 bonus coconut muffin. Then 13 coconut muffin were lost. How many coconut muffin are left?

Answer: → R

Junior agent filled 5 boxes with 9 spy glass each, then found 20 more spy glass. How many spy glass are there in all?

Answer: → N

Junior agent collected 29 energy badge in the morning and 136 energy badge in the afternoon, then split them equally among 3 Cove Patrol. How many energy badge did each get?

Answer: → G

There were 150 map piece in all. 3 map piece were set aside. The rest were shared equally among 3 Cove Patrol. How many map piece did each get?

Answer: → A

Junior agent filled 4 boxes with 2 coconut muffin each, then found 80 more coconut muffin. How many coconut muffin are there in all?

Answer: → H

Junior agent filled 7 boxes with 5 map piece each, then found 36 more map piece. How many map piece are there in all?

Answer: → I

Junior agent filled 3 boxes with 6 spy glass each, then found 25 more spy glass. How many spy glass are there in all?

Answer: → T

Scratch space:

CLUE 3

Bar model word problems

Many footprints were washed away by the rising tide. Let us find the fraction of clues that are still safe in the dry sand.

Draw a bar model to solve each word problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with L S T L E S .

82 89 63 6 19 120 71 82

Junior agent shares 164 spy glass equally among 2 teams. How many spy glass does each team get?

draw a bar model

Answer: → L

Junior agent has 142 energy badge, packed 2 to a bag. How many bags can be filled?

draw a bar model

Answer: → I

Junior agent has 3 times as many map piece as a teammate. The teammate has 2 map piece. How many map piece does junior agent have?

draw a bar model

Answer: → D

One group collected 18 map piece and another group collected 45 map piece. How many map piece in all?

draw a bar model

Answer: → U

Junior agent has 178 spy glass, packed 2 to a bag. How many bags can be filled?

draw a bar model

Answer: → O

The red team has 121 energy badge and the blue team has 1 energy badge. How many more energy badge does the red team have?

draw a bar model

Answer: → H

One group collected 14 energy badge and another group collected 5 energy badge. How many energy badge in all?

draw a bar model

Answer: → W

CLUE 4 Order of operations

We found a locked diary left behind in the sand. To open it, we must solve the secret number code in the exact right order.

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

W									W									
65	30	58	77	12	73	79	35	30	45	65	30	30	79	61	80	30	30	73
78	45	34	80	45	63	63	78	30	35	7	30	73	30					

$17 + 6 \times 8 = \square \rightarrow$ W	$12 \times 9 - 29 = \square \rightarrow$ D	$17 + 8 \times 7 = \square \rightarrow$ N
$45 + 4 \times 4 = \square \rightarrow$ G	$9 + 9 \times 6 = \square \rightarrow$ T	$29 + 2 \times 8 = \square \rightarrow$ A
$4 \times 12 - 18 = \square \rightarrow$ E	$48 + 5 \times 6 = \square \rightarrow$ H	$12 \times 6 - 14 = \square \rightarrow$ F
$5 \times 11 - 21 = \square \rightarrow$ I	$9 \times 11 - 19 = \square \rightarrow$ R	$14 + 7 \times 3 = \square \rightarrow$ S
$59 + 2 \times 9 = \square \rightarrow$ O	$4 \times 2 - 1 = \square \rightarrow$ C	$4 \times 9 - 24 = \square \rightarrow$ U

Scratch space:

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

We need to split our search team into equal groups to cover the island. Let us divide the total number of agents.

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:

$22 \div 11 = \square$

$66 \div 11 = \square$

$36 \div 4 = \square$

$132 \div 11 = \square$

$88 \div 11 = \square$

$50 \div 10 = \square$

$33 \div 11 = \square$

$77 \div 11 = \square$

$6 \div 6 = \square$

$110 \div 10 = \square$

$44 \div 11 = \square$

Step 2 - cross out the sentence with each answer:

1. The villain escaped using a water jetpack, then fired a net launcher at the guards.
2. The villain sped down the river on a turbo surfboard, then launched decoy flares to distract us.
3. The villain soared over the jungle with a stealth glider, then activated sonar goggles in the dark.
4. The villain sped down the river on a turbo surfboard, then activated sonar goggles in the dark.
5. The villain escaped using a water jetpack, then activated sonar goggles in the dark.
6. The villain climbed the cliff with a grappling hook, then activated sonar goggles in the dark.
7. The villain climbed the cliff with a grappling hook, then dropped smoke bombs to hide.
8. The villain sped down the river on a turbo surfboard, then dropped smoke bombs to hide.
9. The villain soared over the jungle with a stealth glider, then shined a bright laser pointer as a signal.
10. The villain zipped away with a high-tech lasso, then activated sonar goggles in the dark.
11. The villain zipped away with a high-tech lasso, then fired a net launcher at the guards.
12. The villain sped down the river on a turbo surfboard, then fired a net launcher at the guards.

Answer Key

The Pineapple Cove Caper

Culprit: Agent Elsa

high-tech lasso · sonar goggles · right handed stance · seaweed green hair · loud whistles

Trail: Start 21 → Clue 1 14 → Clue 2 11 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE VILLAIN DOES NOT USE THE NET LAUNCHER"

$\frac{6}{8}$ of 24 = 18 (T) · $\frac{1}{5}$ of 105 = 21 (V) · $\frac{1}{8}$ of 104 = 13 (D) · $\frac{4}{6}$ of 57 = 38 (N) · $\frac{5}{10}$ of 10 = 5 (A) · $\frac{3}{10}$ of 50 = 15 (L) · $\frac{5}{10}$ of 14 = 7 (I) · $\frac{5}{10}$ of 16 = 8 (R) · $\frac{2}{6}$ of 12 = 4 (C) · $\frac{2}{8}$ of 112 = 28 (U) · $\frac{2}{10}$ of 200 = 40 (H) · $\frac{6}{8}$ of 16 = 12 (E) · $\frac{2}{10}$ of 50 = 10 (O) · $\frac{1}{6}$ of 18 = 3 (S)

Clue 2 (Multi-step word problems): "RIGHT HANDED STANCE"

Junior agent earned 3 coconut muffin in each of 2 rounds, plus 59 bonus coconut muffin. Then 13 coconut muffin were lost. How many coconut muffin are left? = 52 (R) · Junior agent filled 5 boxes with 9 spy glass each, then found 20 more spy glass. How many spy glass are there in all? = 65 (N) · Junior agent collected 29 energy badge in the morning and 136 energy badge in the afternoon, then split them equally among 3 Cove Patrol. How many energy badge did each get? = 55 (G) · There were 150 map piece in all. 3 map piece were set aside. The rest were shared equally among 3 Cove Patrol. How many map piece did each get? = 49 (A) · Junior agent filled 4 boxes with 2 coconut muffin each, then found 80 more coconut muffin. How many coconut muffin are there in all? = 88 (H) · Junior agent filled 7 boxes with 5 map piece each, then found 36 more map piece. How many map piece are there in all? = 71 (I) · Junior agent filled 3 boxes with 6 spy glass each, then found 25 more spy glass. How many spy glass are there in all? = 43 (T)

Clue 3 (Bar model word problems): "LOUD WHISTLES"

Junior agent shares 164 spy glass equally among 2 teams. How many spy glass does each team get? = 82 (L) · Junior agent has 142 energy badge, packed 2 to a bag. How many bags can be filled? = 71 (I) · Junior agent has 3 times as many map piece as a teammate. The teammate has 2 map piece. How many map piece does junior agent have? = 6 (D) · One group collected 18 map piece and another group collected 45 map piece. How many map piece in all? = 63 (U) · Junior agent has 178 spy glass, packed 2 to a bag. How many bags can be filled? = 89 (O) · The red team has 121 energy badge and the blue team has 1 energy badge. How many more energy badge does the red team have? = 120 (H) · One group collected 14 energy badge and another group collected 5 energy badge. How many energy badge in all? = 19 (W)

Clue 4 (Order of operations): "WE FOUND SEAWEED GREEN HAIR AT THE SCENE"

$17 + 6 \times 8 = 65$ (W) · $12 \times 9 - 29 = 79$ (D) · $17 + 8 \times 7 = 73$ (N) · $45 + 4 \times 4 = 61$ (G) · $9 + 9 \times 6 = 63$ (T) · $29 + 2 \times 8 = 45$ (A) · $4 \times 12 - 18 = 30$ (E) · $48 + 5 \times 6 = 78$ (H) · $12 \times 6 - 14 = 58$ (F) · $5 \times 11 - 21 = 34$ (I) · $9 \times 11 - 19 = 80$ (R) · $14 + 7 \times 3 = 35$ (S) · $59 + 2 \times 9 = 77$ (O) · $4 \times 2 - 1 = 7$ (C) · $4 \times 9 - 24 = 12$ (U)

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

$22 \div 11 = 2$ · $66 \div 11 = 6$ · $36 \div 4 = 9$ · $132 \div 11 = 12$ · $88 \div 11 = 8$ · $50 \div 10 = 5$ · $33 \div 11 = 3$ · $77 \div 11 = 7$ · $6 \div 6 = 1$ · $110 \div 10 = 11$ · $44 \div 11 = 4$