



The Case of the Golden Spy-Glass

Grade 2 math · Fractions of a number, Place value, Addition, Subtraction · Reading level grades 3-4

Detective: _____ Date: _____

Oh no! The Golden Spy-Glass has been taken from the vault at the Spy Training Academy! A Rogue Agent snuck past the laser grid. We need to analyze the clues and find the culprit before they escape by submarine!

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 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 SPY GEAR	BACKUP TOOL	WRITING HAND	HAIR STYLE	FOIL ITEM
Agent Taj	Decoy Hologram	EMP Blaster	Right-handed	Neon Green Spikes	Squeaky Shoes
Agent Sky	Decoy Hologram	Night Goggles	Right-handed	Neon Green Spikes	Loud Sneezes
Agent Maya	Smoke Pellets	Voice Changer	Right-handed	Neon Green Spikes	Laser Pointers
Agent Roy	Decoy Hologram	Hacker Tablet	Left-handed	Bright Blue Mohawk	Laser Pointers
Agent Zoe	Camouflage Suit	Night Goggles	Right-handed	Neon Green Spikes	Laser Pointers
Agent Leo	Smoke Pellets	Grappling Hook	Right-handed	Neon Green Spikes	Laser Pointers
Agent Nova	Decoy Hologram	Hacker Tablet	Left-handed	Flame Red Curls	Loud Sneezes
Agent Mia	Jetpack Boots	Voice Changer	Right-handed	Neon Green Spikes	Laser Pointers
Agent Jax	Smoke Pellets	EMP Blaster	Right-handed	Bright Blue Mohawk	Loud Sneezes
Agent Ned	Smoke Pellets	Voice Changer	Left-handed	Bright Blue Mohawk	Squeaky Shoes
Agent Rex	Laser Watch	Voice Changer	Right-handed	Flame Red Curls	Squeaky Shoes
Agent Ben	Jetpack Boots	Hacker Tablet	Left-handed	Neon Green Spikes	Laser Pointers
Agent Dex	Decoy Hologram	Voice Changer	Right-handed	Flame Red Curls	Laser Pointers
Agent Joy	Decoy Hologram	Hacker Tablet	Left-handed	Flame Red Curls	Laser Pointers
Agent Kai	Laser Watch	Night Goggles	Right-handed	Neon Green Spikes	Laser Pointers
Agent Eli	Jetpack Boots	Hacker Tablet	Left-handed	Bright Blue Mohawk	Laser Pointers
Agent Ivy	Laser Watch	Hacker Tablet	Right-handed	Bright Blue Mohawk	Squeaky Shoes
Agent Max	Camouflage Suit	Hacker Tablet	Right-handed	Neon Green Spikes	Squeaky Shoes
Agent Kip	Camouflage Suit	Grappling Hook	Left-handed	Flame Red Curls	Laser Pointers
Agent Kim	Laser Watch	EMP Blaster	Right-handed	Neon Green Spikes	Squeaky Shoes
Agent Sam	Jetpack Boots	Night Goggles	Right-handed	Neon Green Spikes	Loud Sneezes

CLUE 1

Fractions of a number

To start our investigation, we found a pile of discarded agent badges. The clues are hidden on a specific fraction of them.

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

T																T
25	27	18	2	3	39	39	26	3	17	13	24	18	4	17	24	25
32	4	18	26	29	5	26	15	15	39	3	17	29	27	24	24	31

$$5/8 \text{ of } 40 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2/10 \text{ of } 85 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$6/10 \text{ of } 30 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$1/2 \text{ of } 6 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$5/10 \text{ of } 30 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$2/4 \text{ of } 52 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$1/6 \text{ of } 12 = \boxed{} \rightarrow \boxed{\text{V}}$$

$$1/5 \text{ of } 120 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$1/4 \text{ of } 108 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$1/6 \text{ of } 78 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$2/10 \text{ of } 195 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$2/8 \text{ of } 124 = \boxed{} \rightarrow \boxed{\text{K}}$$

$$3/6 \text{ of } 58 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$4/8 \text{ of } 64 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$1/5 \text{ of } 25 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$4/6 \text{ of } 6 = \boxed{} \rightarrow \boxed{\text{S}}$$

Scratch space:

CLUE 2

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

58 41 46 34 91 34 23 46 97 58 29 51 13 58 46 34 29 13 58 41

58 41 46 13 51 51 13 35 41 58 41 17 61 84

What number has 5 tens and 8 ones? → **T**

What number has 6 tens and 1 one? → **N**

What number has 8 tens and 4 ones? → **D**

What number has 9 tens and 7 ones? → **C**

What number has 2 tens and 9 ones? → **W**

What number has 3 tens and 5 ones? → **G**

What number has 4 tens and 1 one? → **H**

What number has 1 ten and 3 ones? →

1

What number has 1 ten and 7 ones? → **A**

What number has 2 tens and 3 ones? → **P**

What number has 4 tens and 6 ones? → **E**

What number has 5 tens and 1 one? → **R**

What number has 3 tens and 4 ones? → **S**

What number has 9 tens and 1 one? → **U**

Scratch space:

CLUE 3 Addition

A witness saw some footprints in the training yard. We need to add up all the shoe tracks to see which direction they went.

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

T						T				T				T				
49	79	74	47	39	74	49	46	81	33	49	95	36	64	49	74	46	80	47
					T									T				
80	95	81	39	79	49	96	36	33	74	95	97	40	81	51	49	74	95	33

$26 + 23 = \square \rightarrow$ T	$15 + 31 = \square \rightarrow$ D	$28 + 19 = \square \rightarrow$ Y
$16 + 17 = \square \rightarrow$ S	$24 + 40 = \square \rightarrow$ C	$40 + 56 = \square \rightarrow$ L
$53 + 28 = \square \rightarrow$ I	$33 + 64 = \square \rightarrow$ P	$15 + 36 = \square \rightarrow$ N
$26 + 14 = \square \rightarrow$ O	$22 + 17 = \square \rightarrow$ G	$38 + 41 = \square \rightarrow$ H
$14 + 22 = \square \rightarrow$ A	$57 + 38 = \square \rightarrow$ R	$34 + 46 = \square \rightarrow$ B
$52 + 22 = \square \rightarrow$ E		

Scratch space:

CLUE 4 Subtraction

The suspect drained the fuel from our spy scooters! Let's subtract the stolen fuel from our total to see how far we can chase them.

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

W																	
59	79	69	11	57	70	78	70	79	11	70	52	72	79	79	70		
53	85	75	33	62	40	88	75	72	75	70	74	40	79	63	79	70	74

$86 - 27 = \square \rightarrow \mathbf{W}$	$82 - 8 = \square \rightarrow \mathbf{T}$	$105 - 33 = \square \rightarrow \mathbf{R}$
$39 - 6 = \square \rightarrow \mathbf{K}$	$100 - 25 = \square \rightarrow \mathbf{I}$	$72 - 3 = \square \rightarrow \mathbf{F}$
$115 - 30 = \square \rightarrow \mathbf{P}$	$90 - 20 = \square \rightarrow \mathbf{N}$	$83 - 31 = \square \rightarrow \mathbf{G}$
$90 - 12 = \square \rightarrow \mathbf{D}$	$103 - 40 = \square \rightarrow \mathbf{V}$	$101 - 13 = \square \rightarrow \mathbf{A}$
$36 - 25 = \square \rightarrow \mathbf{O}$	$109 - 30 = \square \rightarrow \mathbf{E}$	$58 - 5 = \square \rightarrow \mathbf{S}$
$42 - 2 = \square \rightarrow \mathbf{H}$	$67 - 10 = \square \rightarrow \mathbf{U}$	$88 - 26 = \square \rightarrow \mathbf{Y}$

Scratch space:

CLUE 5**Fractions of a number - the last clue**

We found a box of secret decoder rings left behind. We need to count a fraction of the rings to unlock the final secret.

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:

$3/4 \text{ of } 12 = \boxed{}$

$4/10 \text{ of } 10 = \boxed{}$

$2/4 \text{ of } 2 = \boxed{}$

$2/8 \text{ of } 48 = \boxed{}$

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

$1/4 \text{ of } 20 = \boxed{}$

$3/6 \text{ of } 16 = \boxed{}$

$1/3 \text{ of } 18 = \boxed{}$

$3/4 \text{ of } 4 = \boxed{}$

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

$3/6 \text{ of } 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain zapped the vault laser with a laser watch, then scanned the dark halls with night goggles.
2. The villain zapped the vault laser with a laser watch, then shut down the cameras with an EMP blaster.
3. The villain zapped the vault laser with a laser watch, then scaled the roof using a grappling hook.
4. The villain zoomed over the wall with jetpack boots, then tricked the vault lock with a voice changer.
5. The villain blended into the wall with a camouflage suit, then tricked the vault lock with a voice changer.
6. The villain escaped the lobby using smoke pellets, then scaled the roof using a grappling hook.
7. The villain zoomed over the wall with jetpack boots, then scanned the dark halls with night goggles.
8. The villain blended into the wall with a camouflage suit, then scaled the roof using a grappling hook.
9. The villain blended into the wall with a camouflage suit, then scanned the dark halls with night goggles.
10. The villain escaped the lobby using smoke pellets, then scanned the dark halls with night goggles.
11. The villain escaped the lobby using smoke pellets, then tricked the vault lock with a voice changer.
12. The villain zoomed over the wall with jetpack boots, then scaled the roof using a grappling hook.

Answer Key

The Case of the Golden Spy-Glass

Culprit: Agent Maya

Smoke Pellets · Voice Changer · Right-handed · Neon Green Spikes · Laser Pointers

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

Clue 1 (Fractions of a number): "THE VILLAIN DOES NOT USE A GRAPPLING HOOK"

$5/8$ of 40 = 25 (T) · $2/10$ of 85 = 17 (N) · $6/10$ of 30 = 18 (E) · $1/2$ of 6 = 3 (I) · $5/10$ of 30 = 15 (P) · $2/4$ of 52 = 26 (A) · $1/6$ of 12 = 2 (V) · $1/5$ of 120 = 24 (O) · $1/4$ of 108 = 27 (H) · $1/6$ of 78 = 13 (D) · $2/10$ of 195 = 39 (L) · $2/8$ of 124 = 31 (K) · $3/6$ of 58 = 29 (G) · $4/8$ of 64 = 32 (U) · $1/5$ of 25 = 5 (R) · $4/6$ of 6 = 4 (S)

Clue 2 (Place value): "THE SUSPECT WRITES WITH THEIR RIGHT HAND"

What number has 5 tens and 8 ones? = 58 (T) · What number has 6 tens and 1 one? = 61 (N) · What number has 8 tens and 4 ones? = 84 (D) · What number has 9 tens and 7 ones? = 97 (C) · What number has 2 tens and 9 ones? = 29 (W) · What number has 3 tens and 5 ones? = 35 (G) · What number has 4 tens and 1 one? = 41 (H) · What number has 1 ten and 3 ones? = 13 (I) · What number has 1 ten and 7 ones? = 17 (A) · What number has 2 tens and 3 ones? = 23 (P) · What number has 4 tens and 6 ones? = 46 (E) · What number has 5 tens and 1 one? = 51 (R) · What number has 3 tens and 4 ones? = 34 (S) · What number has 9 tens and 1 one? = 91 (U)

Clue 3 (Addition): "THEY GET DISTRACTED BY BRIGHT LASER POINTERS"

$26 + 23 = 49$ (T) · $15 + 31 = 46$ (D) · $28 + 19 = 47$ (Y) · $16 + 17 = 33$ (S) · $24 + 40 = 64$ (C) · $40 + 56 = 96$ (L) · $53 + 28 = 81$ (I) · $33 + 64 = 97$ (P) · $15 + 36 = 51$ (N) · $26 + 14 = 40$ (O) · $22 + 17 = 39$ (G) · $38 + 41 = 79$ (H) · $14 + 22 = 36$ (A) · $57 + 38 = 95$ (R) · $34 + 46 = 80$ (B) · $52 + 22 = 74$ (E)

Clue 4 (Subtraction): "WE FOUND NEON GREEN SPIKY HAIR IN THE VENT"

$86 - 27 = 59$ (W) · $82 - 8 = 74$ (T) · $105 - 33 = 72$ (R) · $39 - 6 = 33$ (K) · $100 - 25 = 75$ (I) · $72 - 3 = 69$ (F) · $115 - 30 = 85$ (P) · $90 - 20 = 70$ (N) · $83 - 31 = 52$ (G) · $90 - 12 = 78$ (D) · $103 - 40 = 63$ (V) · $101 - 13 = 88$ (A) · $36 - 25 = 11$ (O) · $109 - 30 = 79$ (E) · $58 - 5 = 53$ (S) · $42 - 2 = 40$ (H) · $67 - 10 = 57$ (U) · $88 - 26 = 62$ (Y)

Clue 5 (Fractions of a number): surviving statement is box 11 → Agent Maya

$3/4$ of 12 = 9 · $4/10$ of 10 = 4 · $2/4$ of 2 = 1 · $2/8$ of 48 = 12 · $2/10$ of 50 = 10 · $1/4$ of 20 = 5 · $3/6$ of 16 = 8 · $1/3$ of 18 = 6 · $3/4$ of 4 = 3 · $5/10$ of 14 = 7 · $3/6$ of 4 = 2