



The Spy Academy Codebreakers

Grade 4 math · Rounding, Addition, Subtraction, Multiplication, Division · Reading level grades 5-6

Detective: _____ **Date:** _____

A Rogue Agent has infiltrated the Spy Academy and stolen the Master Decryption Key! The Chief Tech Director was locked inside the laser vault. We must analyze the evidence left behind to deduce which Academy member turned rogue before they escape on the stealth jet.

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	SIGNATURE GADGET	HACKING TOOL	WATCH WRIST	DISGUISE WIG	SNACK DISTRACTION
Tony Stark	Grappling Hook Belt	Keycard cloner	Left wrist watch	Toxic green wig	Spicy pepper
Inspector Gadget	Sonic Screwdriver	Laser decrypter	Left wrist watch	Sunset orange wig	Sour lemon
Selina Kyle	Smoke Bomb Pen	Data bypasser	Right wrist watch	Neon blue wig	Sticky honey
Perry Platypus	Grappling Hook Belt	Mainframe override	Right wrist watch	Sunset orange wig	Sour lemon
Indiana Jones	Laser Ring	Mainframe override	Right wrist watch	Neon blue wig	Sour lemon
Spy Kid Juni	Sonic Screwdriver	Keycard cloner	Left wrist watch	Neon blue wig	Sour lemon
Harriet Spy	Hover Boots	Data bypasser	Right wrist watch	Toxic green wig	Sour lemon
Frank Hardy	Grappling Hook Belt	Mainframe override	Right wrist watch	Sunset orange wig	Sticky honey
James Bond	Laser Ring	Mainframe override	Left wrist watch	Sunset orange wig	Sour lemon
Carmen Sandiego	Grappling Hook Belt	Laser decrypter	Right wrist watch	Neon blue wig	Sour lemon
Austin Powers	Grappling Hook Belt	Laser decrypter	Right wrist watch	Sunset orange wig	Sticky honey
Natasha Romanoff	Sonic Screwdriver	Laser decrypter	Right wrist watch	Neon blue wig	Sticky honey
Bruce Wayne	Sonic Screwdriver	Signal jammer	Right wrist watch	Neon blue wig	Sour lemon
Lara Croft	Sonic Screwdriver	Keycard cloner	Right wrist watch	Neon blue wig	Sour lemon
Cody Banks	Smoke Bomb Pen	Signal jammer	Right wrist watch	Neon blue wig	Sour lemon
Joe Hardy	Laser Ring	Signal jammer	Right wrist watch	Sunset orange wig	Spicy pepper
Spy Kid Carmen	Hover Boots	Signal jammer	Right wrist watch	Toxic green wig	Sour lemon
Kim Possible	Sonic Screwdriver	Mainframe override	Left wrist watch	Neon blue wig	Sticky honey
Nancy Drew	Laser Ring	Signal jammer	Left wrist watch	Sunset orange wig	Sticky honey
Sherlock Holmes	Hover Boots	Laser decrypter	Right wrist watch	Toxic green wig	Spicy pepper
John Watson	Laser Ring	Laser decrypter	Right wrist watch	Sunset orange wig	Sour lemon

CLUE 1

A motion radar picked up the fleeing suspect. The radar screen only displays numbers rounded to the nearest ten, so we have to estimate the target's distance to narrow down the sector.

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

The diagram illustrates the distributive property using the example of 11000 divided by 11. It shows 11000 as a large rectangle divided into 11 smaller rectangles, each representing 1000. These are then grouped into 11 groups of 1000, which are further decomposed into 11 groups of 100 and 10, resulting in 110 and 9900.

11000 = 110 + 9900

11000 ÷ 11 = (110 + 9900) ÷ 11

11000 ÷ 11 = 11000 ÷ 11

Round 109 to the nearest ten $\rightarrow$ **T**

Round 934 to the nearest hundred $\rightarrow$ **U**

Round 4,259 to the nearest hundred → **L**

Round 5,093 to the nearest thousand → **K**

Round 8,682 to the nearest thousand → **E**

Round 87 to the nearest ten $\rightarrow$ **H**

Round 26 to the nearest ten $\rightarrow$ **R**

Round 1,677 to the nearest hundred $\rightarrow$ **P**

Round 171 to the nearest ten $\rightarrow$

Round 373 to the nearest ten $\rightarrow$ **N**

Round 2,287 to the nearest hundred → **S**

Round 1,057 to the nearest hundred → **A**

Round 132 to the nearest ten $\rightarrow$ **C**

Round 684 to the nearest hundred $\rightarrow$ **D**

Round 227 to the nearest ten $\rightarrow$ **Y**

Scratch space:

CLUE 2 Addition

We searched the supply lockers and counted all the remaining spy gear. Adding these extra items together will reveal the total inventory count.

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

T			T					T						
5642	4492	5504	5642	5668	7971	2029	5504	5642	2796	5504	5668	7971	7496	5668

				T				T			T			
7971	4144	2029	4492	5642	2796	7971	4144	7496	5642	2796	5668	5642	6319	4492

$3276 + 2366 = \square \rightarrow \boxed{\text{T}}$	$3586 + 3910 = \square \rightarrow \boxed{\text{S}}$	$919 + 1877 = \square \rightarrow \boxed{\text{W}}$
$1777 + 3727 = \square \rightarrow \boxed{\text{E}}$	$2573 + 3746 = \square \rightarrow \boxed{\text{C}}$	$3661 + 2007 = \square \rightarrow \boxed{\text{A}}$
$1682 + 2810 = \square \rightarrow \boxed{\text{H}}$	$5271 + 2700 = \square \rightarrow \boxed{\text{R}}$	$980 + 1049 = \square \rightarrow \boxed{\text{G}}$
$1578 + 2566 = \square \rightarrow \boxed{\text{I}}$		

Scratch space:

Subtraction

The vault code requires finding the difference between two security keycodes. Let us subtract the backup code from the primary alarm code.

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

4215 2919 1894 1755 2414 7354 2234 1894 6050 7354 1894 1563 4215 2489 2414 4770 1894 3413

3413 2414 2234 1755 2489 1894 6510 2414 1563

$8079 - 3864 = \boxed{} \rightarrow \mathbf{T}$

$$6124 - 4369 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$4761 - 2272 = \boxed{} \rightarrow \boxed{\text{L}}$$

$5305 - 3411 = \boxed{} \rightarrow \mathbf{E}$

$$10106 - 2752 = \boxed{} \rightarrow \boxed{\mathbf{G}}$$

$$6101 - 3687 = \boxed{} \rightarrow \boxed{0}$$

$$8854 - 4084 = \boxed{} \rightarrow \mathbf{v}$$

$$3086 - 852 = \boxed{} \rightarrow \boxed{\text{U}}$$

$5357 - 2438 = \boxed{} \rightarrow \boxed{\text{H}}$

$10537 - 4027 = \boxed{} \rightarrow \boxed{\text{M}}$

$$6683 - 3270 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$$8856 - 2806 = \boxed{} \rightarrow \boxed{\mathbf{A}}$$

$$3648 - 2085 = \boxed{} \rightarrow \boxed{\text{N}}$$

Scratch space:

CLUE 4

Multiplication facts (1-12)

The laser grid is arranged in a perfect grid of rows and columns. Multiplying the lasers in each row will help us calculate the safe pathway through.

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

N			N													
10	16	33	10	12	40	49	16	11	54	2	81	54	12	16	84	121
												N				
11	16	84	16	144	1	1	25	16	121	27	16	10	16			

$10 \times 1 = \square \rightarrow \boxed{\text{N}}$

$12 \times 12 = \square \rightarrow \boxed{\text{A}}$

$8 \times 5 = \square \rightarrow \boxed{\text{L}}$

$2 \times 1 = \square \rightarrow \boxed{\text{G}}$

$9 \times 9 = \square \rightarrow \boxed{\text{F}}$

$6 \times 9 = \square \rightarrow \boxed{\text{I}}$

$11 \times 11 = \square \rightarrow \boxed{\text{S}}$

$12 \times 7 = \square \rightarrow \boxed{\text{R}}$

$3 \times 9 = \square \rightarrow \boxed{\text{C}}$

$2 \times 8 = \square \rightarrow \boxed{\text{E}}$

$1 \times 1 = \square \rightarrow \boxed{\text{T}}$

$7 \times 7 = \square \rightarrow \boxed{\text{U}}$

$11 \times 1 = \square \rightarrow \boxed{\text{W}}$

$3 \times 11 = \square \rightarrow \boxed{\text{O}}$

$5 \times 5 = \square \rightarrow \boxed{\text{H}}$

$2 \times 6 = \square \rightarrow \boxed{\text{B}}$

Scratch space:

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

The agents must split the recovery tools equally among their teams. Dividing the tools fairly will give us the final clue to identify the rogue.

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:

$120 \div 10 = \boxed{}$

$70 \div 7 = \boxed{}$

$7 \div 7 = \boxed{}$

$11 \div 1 = \boxed{}$

$10 \div 2 = \boxed{}$

$90 \div 10 = \boxed{}$

$12 \div 4 = \boxed{}$

$84 \div 12 = \boxed{}$

$8 \div 1 = \boxed{}$

$20 \div 10 = \boxed{}$

$66 \div 11 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain scales the elevator shaft, then downloads the top secret blueprints.
2. The villain disables the motion cameras, then downloads the top secret blueprints.
3. The villain sneaks past the laser field, then steals the stealth jet keys.
4. The villain bypasses the retinal scanner, then downloads the top secret blueprints.
5. The villain scales the elevator shaft, then steals the stealth jet keys.
6. The villain scales the elevator shaft, then scrambles the defense mainframe.
7. The villain glides through the air ducts, then clones the command master key.
8. The villain sneaks past the laser field, then clones the command master key.
9. The villain glides through the air ducts, then scrambles the defense mainframe.
10. The villain glides through the air ducts, then steals the stealth jet keys.
11. The villain bypasses the retinal scanner, then steals the stealth jet keys.
12. The villain bypasses the retinal scanner, then scrambles the defense mainframe.

Answer Key

The Spy Academy Codebreakers

Culprit: Bruce Wayne

Sonic Screwdriver · Signal jammer · Right wrist watch · Neon blue wig · Sour lemon

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE SNEAK DOES NOT USE A LASER DECRYPTER"

Round 109 to the nearest ten = 110 (T) · Round 934 to the nearest hundred = 900 (U) · Round 4,259 to the nearest hundred = 4300 (L) · Round 5,093 to the nearest thousand = 5000 (K) · Round 8,682 to the nearest thousand = 9000 (E) · Round 87 to the nearest ten = 90 (H) · Round 26 to the nearest ten = 30 (R) · Round 1,677 to the nearest hundred = 1700 (P) · Round 171 to the nearest ten = 170 (O) · Round 373 to the nearest ten = 370 (N) · Round 2,287 to the nearest hundred = 2300 (S) · Round 1,057 to the nearest hundred = 1100 (A) · Round 132 to the nearest ten = 130 (C) · Round 684 to the nearest hundred = 700 (D) · Round 227 to the nearest ten = 230 (Y)

Clue 2 (Addition): "THE TARGET WEARS A RIGHT WRIST WATCH"

$3276 + 2366 = 5642$ (T) · $3586 + 3910 = 7496$ (S) · $919 + 1877 = 2796$ (W) · $1777 + 3727 = 5504$ (E) · $2573 + 3746 = 6319$ (C) · $3661 + 2007 = 5668$ (A) · $1682 + 2810 = 4492$ (H) · $5271 + 2700 = 7971$ (R) · $980 + 1049 = 2029$ (G) · $1578 + 2566 = 4144$ (I)

Clue 3 (Subtraction): "THE ROGUE AGENT LOVES SOUR LEMON"

$8079 - 3864 = 4215$ (T) · $6124 - 4369 = 1755$ (R) · $4761 - 2272 = 2489$ (L) · $5305 - 3411 = 1894$ (E) · $10106 - 2752 = 7354$ (G) · $6101 - 3687 = 2414$ (O) · $8854 - 4084 = 4770$ (V) · $3086 - 852 = 2234$ (U) · $5357 - 2438 = 2919$ (H) · $10537 - 4027 = 6510$ (M) · $6683 - 3270 = 3413$ (S) · $8856 - 2806 = 6050$ (A) · $3648 - 2085 = 1563$ (N)

Clue 4 (Multiplication facts (1-12)): "NEON BLUE WIG FIBERS WERE AT THE SCENE"

$10 \times 1 = 10$ (N) · $12 \times 12 = 144$ (A) · $8 \times 5 = 40$ (L) · $2 \times 1 = 2$ (G) · $9 \times 9 = 81$ (F) · $6 \times 9 = 54$ (I) · $11 \times 11 = 121$ (S) · $12 \times 7 = 84$ (R) · $3 \times 9 = 27$ (C) · $2 \times 8 = 16$ (E) · $1 \times 1 = 1$ (T) · $7 \times 7 = 49$ (U) · $11 \times 1 = 11$ (W) · $3 \times 11 = 33$ (O) · $5 \times 5 = 25$ (H) · $2 \times 6 = 12$ (B)

Clue 5 (Division facts (1-12)): surviving statement is box 4 → Bruce Wayne

$120 \div 10 = 12$ · $70 \div 7 = 10$ · $7 \div 7 = 1$ · $11 \div 1 = 11$ · $10 \div 2 = 5$ · $90 \div 10 = 9$ · $12 \div 4 = 3$ · $84 \div 12 = 7$ · $8 \div 1 = 8$ · $20 \div 10 = 2$ · $66 \div 11 = 6$