The Golden Decoder Caper

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

Detective: _____ **Date:** _____

Someone has swiped the Golden Decoder Ring right out of the Headmaster's vault at the Whispering Pines Spy Academy! As top junior detectives, we must analyze the clues, crack the codes, and identify the rogue agent.

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

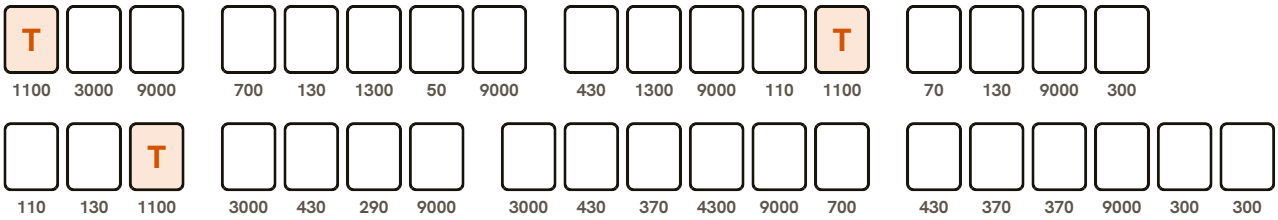
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	GADGET SPECIALTY	SECRET SKILL	WATCH WRIST	DISGUISE WIG	FAVORITE SNACK
Agent Giselle	Smoke Bomb	Hacker Access	Left Wrist Watch	Neon Blue Wig	Sour Gummies
Agent Owen	Laser Pen	Safe Cracking	Left Wrist Watch	Bright Orange Wig	Sour Gummies
Agent Leo	Decoder Watch	Lockpicking	Right Wrist Watch	Neon Blue Wig	Sour Gummies
Agent Hugo	Decoder Watch	Lockpicking	Right Wrist Watch	Bright Orange Wig	Maple Fudge
Agent Piper	Grappling Hook	Lockpicking	Left Wrist Watch	Neon Blue Wig	Maple Fudge
Agent Quinn	Decoder Watch	Lockpicking	Left Wrist Watch	Neon Blue Wig	Sour Gummies
Agent Jax	Smoke Bomb	Code Breaking	Left Wrist Watch	Neon Blue Wig	Sour Gummies
Agent Vance	Laser Pen	Laser Dodging	Right Wrist Watch	Jet Black Wig	Cheese Puffs
Agent Ryder	Laser Pen	Code Breaking	Left Wrist Watch	Bright Orange Wig	Sour Gummies
Agent Maya	Decoder Watch	Safe Cracking	Left Wrist Watch	Bright Orange Wig	Cheese Puffs
Agent Dax	Decoder Watch	Laser Dodging	Left Wrist Watch	Bright Orange Wig	Sour Gummies
Agent Ursula	Spy Camera	Laser Dodging	Right Wrist Watch	Bright Orange Wig	Maple Fudge
Agent Wyatt	Laser Pen	Lockpicking	Left Wrist Watch	Jet Black Wig	Sour Gummies
Agent Elena	Decoder Watch	Laser Dodging	Left Wrist Watch	Neon Blue Wig	Sour Gummies
Agent Ivy	Spy Camera	Hacker Access	Right Wrist Watch	Bright Orange Wig	Cheese Puffs
Agent Brody	Smoke Bomb	Laser Dodging	Left Wrist Watch	Neon Blue Wig	Sour Gummies
Agent Nova	Laser Pen	Safe Cracking	Left Wrist Watch	Jet Black Wig	Cheese Puffs
Agent Skye	Decoder Watch	Code Breaking	Left Wrist Watch	Bright Orange Wig	Sour Gummies
Agent Zara	Laser Pen	Safe Cracking	Right Wrist Watch	Bright Orange Wig	Sour Gummies
Agent Carmen	Decoder Watch	Hacker Access	Right Wrist Watch	Bright Orange Wig	Sour Gummies
Agent Archer	Grappling Hook	Laser Dodging	Right Wrist Watch	Neon Blue Wig	Cheese Puffs

CLUE 1 Rounding

> The security radar system took a hit and now only displays distance numbers rounded to the nearest ten. Rounding these readings will help us trace the agent's path.

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



Round 1,145 to the nearest hundred ☐ → T

Round 66 to the nearest ten ☐ → D

Round 111 to the nearest ten ☐ → N

Round 339 to the nearest hundred ☐ → S

Round 694 to the nearest hundred ☐ → R

Round 429 to the nearest ten ☐ → A

Round 8,596 to the nearest thousand ☐ → E

Round 132 to the nearest ten ☐ → O

Round 373 to the nearest ten ☐ → C

Round 51 to the nearest ten ☐ → U

Round 3,453 to the nearest thousand ☐ → H

Round 4,305 to the nearest hundred ☐ → K

Round 1,307 to the nearest hundred ☐ → G

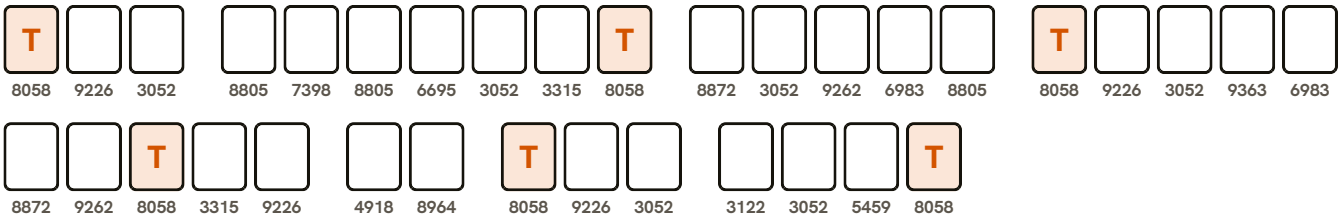
Round 294 to the nearest ten ☐ → V

Scratch space:

CLUE 2 Addition

> A crate of training gear was knocked over during the escape. If we add up the weight of all the spilled items, we can unlock the backup security feed.

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



2789 + 5269 = ☐ → T	3017 + 4381 = ☐ → U	1755 + 1560 = ☐ → C
5354 + 3518 = ☐ → W	2869 + 6095 = ☐ → N	1855 + 1197 = ☐ → E
2745 + 2173 = ☐ → O	2833 + 4150 = ☐ → R	6182 + 3181 = ☐ → I
5998 + 3228 = ☐ → H	3720 + 2975 = ☐ → P	5655 + 3607 = ☐ → A
3656 + 1803 = ☐ → F	1793 + 1329 = ☐ → L	3442 + 5363 = ☐ → S

Scratch space:

CLUE 3 Subtraction

> The vault's laser barriers lost power during the heist. By subtracting the remaining battery level from the maximum, we can calculate how long the rogue was inside.

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

7514 - 117 = ☐ → S

4567 - 1605 = ☐ → E

8854 - 762 = ☐ → I

5229 - 1035 = ☐ → A

7158 - 4596 = ☐ → W

7102 - 54 = ☐ → M

3126 - 867 = ☐ → F

11505 - 2958 = ☐ → O

3956 - 1383 = ☐ → G

4850 - 1973 = ☐ → T

7876 - 3115 = ☐ → D

12921 - 4031 = ☐ → B

7153 - 2134 = ☐ → U

4287 - 667 = ☐ → P

11493 - 4429 = ☐ → R

7084 - 2578 = ☐ → L

11170 - 2210 = ☐ → Y

8318 - 4682 = ☐ → N

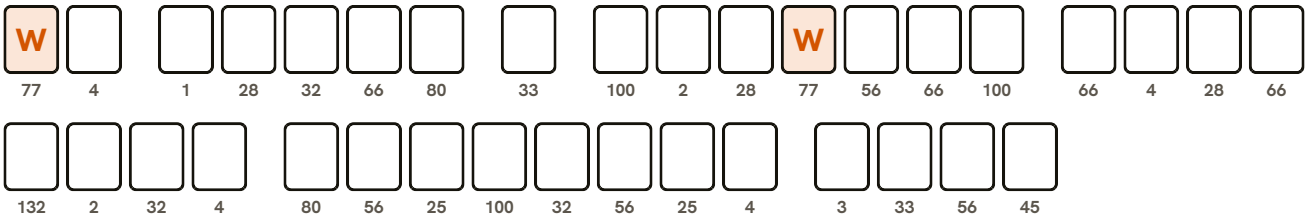
3505 - 2307 = ☐ → H

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The hallway is lined with grids of gear lockers. Multiplying the rows of lockers by the columns will reveal which locker holds the next clue.

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



11 × 7 = ☐ → W	1 × 1 = ☐ → F	3 × 11 = ☐ → A
11 × 12 = ☐ → B	9 × 5 = ☐ → R	1 × 4 = ☐ → E
8 × 4 = ☐ → U	10 × 10 = ☐ → G	2 × 1 = ☐ → L
7 × 4 = ☐ → O	8 × 10 = ☐ → D	8 × 7 = ☐ → I
11 × 6 = ☐ → N	3 × 1 = ☐ → H	5 × 5 = ☐ → S

Scratch space:

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

> We intercepted a scrambled data packet of secret files. Dividing the total files equally among our team members will crack the decryption key.

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:

9 ÷ 1 = ☐	88 ÷ 8 = ☐	44 ÷ 11 = ☐	9 ÷ 9 = ☐	32 ÷ 4 = ☐
70 ÷ 10 = ☐	80 ÷ 8 = ☐	42 ÷ 7 = ☐	14 ÷ 7 = ☐	36 ÷ 12 = ☐
60 ÷ 12 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain vanished into thin air using a smoke bomb, then hacked into the main frame.
2. The villain snapped photos of the secret plans with a spy camera, then dodged the red security lasers.
3. The villain overrode the security keypad with a decoder watch, then broke the encrypted firewall code.
4. The villain overrode the security keypad with a decoder watch, then picked the heavy vault lock.
5. The villain snapped photos of the secret plans with a spy camera, then broke the encrypted firewall code.
6. The villain zapped the vault lock with a laser pen, then cracked the high-tech safe.
7. The villain zapped the vault lock with a laser pen, then hacked into the main frame.
8. The villain swung through the skylight with a grappling hook, then picked the heavy vault lock.
9. The villain vanished into thin air using a smoke bomb, then dodged the red security lasers.
10. The villain swung through the skylight with a grappling hook, then hacked into the main frame.
11. The villain overrode the security keypad with a decoder watch, then dodged the red security lasers.
12. The villain vanished into thin air using a smoke bomb, then broke the encrypted firewall code.

TEACHER / PARENT

Answer Key

The Golden Decoder Caper

Culprit: Agent Jax

Smoke Bomb · Code Breaking · Left Wrist Watch · Neon Blue Wig · Sour Gummies

Trail: Start 21 → Clue 1 18 → Clue 2 12 → Clue 3 9 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE ROGUE AGENT DOES NOT HAVE HACKER ACCESS"

Round 1,145 to the nearest hundred = 1100 (T) · Round 66 to the nearest ten = 70 (D) · Round 111 to the nearest ten = 110 (N) · Round 339 to the nearest hundred = 300 (S) · Round 694 to the nearest hundred = 700 (R) · Round 429 to the nearest ten = 430 (A) · Round 8,596 to the nearest thousand = 9000 (E) · Round 132 to the nearest ten = 130 (O) · Round 373 to the nearest ten = 370 (C) · Round 51 to the nearest ten = 50 (U) · Round 3,453 to the nearest thousand = 3000 (H) · Round 4,305 to the nearest hundred = 4300 (K) · Round 1,307 to the nearest hundred = 1300 (G) · Round 294 to the nearest ten = 290 (V)

Clue 2 (Addition): "THE SUSPECT WEARS THEIR WATCH ON THE LEFT"

2789 + 5269 = 8058 (T) · 3017 + 4381 = 7398 (U) · 1755 + 1560 = 3315 (C) · 5354 + 3518 = 8872 (W) · 2869 + 6095 = 8964 (N) · 1855 + 1197 = 3052 (E) · 2745 + 2173 = 4918 (O) · 2833 + 4150 = 6983 (R) · 6182 + 3181 = 9363 (I) · 5998 + 3228 = 9226 (H) · 3720 + 2975 = 6695 (P) · 5655 + 3607 = 9262 (A) · 3656 + 1803 = 5459 (F) · 1793 + 1329 = 3122 (L) · 3442 + 5363 = 8805 (S)

Clue 3 (Subtraction): "SOUR GUMMY WRAPPERS WERE LEFT BEHIND"

7514 - 117 = 7397 (S) · 4567 - 1605 = 2962 (E) · 8854 - 762 = 8092 (I) · 5229 - 1035 = 4194 (A) · 7158 - 4596 = 2562 (W) · 7102 - 54 = 7048 (M) · 3126 - 867 = 2259 (F) · 11505 - 2958 = 8547 (O) · 3956 - 1383 = 2573 (G) · 4850 - 1973 = 2877 (T) · 7876 - 3115 = 4761 (D) · 12921 - 4031 = 8890 (B) · 7153 - 2134 = 5019 (U) · 4287 - 667 = 3620 (P) · 11493 - 4429 = 7064 (R) · 7084 - 2578 = 4506 (L) · 11170 - 2210 = 8960 (Y) · 8318 - 4682 = 3636 (N) · 3505 - 2307 = 1198 (H)

Clue 4 (Multiplication facts (1-12)): "WE FOUND A GLOWING NEON BLUE DISGUISE HAIR"

11 × 7 = 77 (W) · 1 × 1 = 1 (F) · 3 × 11 = 33 (A) · 11 × 12 = 132 (B) · 9 × 5 = 45 (R) · 1 × 4 = 4 (E) · 8 × 4 = 32 (U) · 10 × 10 = 100 (G) · 2 × 1 = 2 (L) · 7 × 4 = 28 (O) · 8 × 10 = 80 (D) · 8 × 7 = 56 (I) · 11 × 6 = 66 (N) · 3 × 1 = 3 (H) · 5 × 5 = 25 (S)

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

9 ÷ 1 = 9 · 88 ÷ 8 = 11 · 44 ÷ 11 = 4 · 9 ÷ 9 = 1 · 32 ÷ 4 = 8 · 70 ÷ 10 = 7 · 80 ÷ 8 = 10 · 42 ÷ 7 = 6 · 14 ÷ 7 = 2 · 36 ÷ 12 = 3 · 60 ÷ 12 = 5