



The Case of the Rogue Robot

Grade 5 math · Addition, Subtraction, Multiplication, Fractions of a number, Division · Reading level grades 3-4

Detective: _____ Date: _____

A rogue robot sneaked into the Gearopolis Robot Factory and scrambled the master blueprint. Detective Nova needs your help to process the clues and find out which bot did it.

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 robot is _____

Possible suspects

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

NAME	PRIMARY TOOL	SECONDARY MODULE	DOMINANT HAND	HEAD WIRING	SYSTEM VULNERABILITY
Turbo Tom	EMP Blast	Solar Battery	Left-handed	Silver Antenna	Magnet Wand
Sparky Sam	Laser Cutter	Shield Generator	Right-handed	Blue Neon Strips	Water Splash
Cable Carl	EMP Blast	Plasma Core	Left-handed	Blue Neon Strips	Rust Spray
Pixel Pete	EMP Blast	Solar Battery	Right-handed	Silver Antenna	Water Splash
Gizmo Gabe	EMP Blast	Plasma Core	Right-handed	Copper Wires	Magnet Wand
Matrix Maya	Grappling Hook	Shield Generator	Left-handed	Copper Wires	Magnet Wand
Data Daisy	Laser Cutter	Force Fields	Left-handed	Copper Wires	Water Splash
Rotor Rita	Laser Cutter	Plasma Core	Left-handed	Silver Antenna	Rust Spray
Circuit Sid	EMP Blast	Rocket Boots	Left-handed	Silver Antenna	Rust Spray
Nano Nina	Jet Thrusters	Force Fields	Right-handed	Copper Wires	Rust Spray
Sensor Seth	Jet Thrusters	Shield Generator	Left-handed	Silver Antenna	Rust Spray
Micro Mia	Jet Thrusters	Solar Battery	Right-handed	Silver Antenna	Water Splash
Laser Lily	EMP Blast	Force Fields	Right-handed	Silver Antenna	Rust Spray
Chip Charlie	Sonic Cannon	Force Fields	Left-handed	Silver Antenna	Rust Spray
Tracker Tim	Jet Thrusters	Plasma Core	Left-handed	Silver Antenna	Magnet Wand
Gears Garry	Jet Thrusters	Rocket Boots	Left-handed	Silver Antenna	Rust Spray
Radar Ray	Laser Cutter	Rocket Boots	Right-handed	Copper Wires	Rust Spray
Byte Bella	Sonic Cannon	Solar Battery	Left-handed	Blue Neon Strips	Rust Spray
Bolt Ben	Jet Thrusters	Plasma Core	Left-handed	Copper Wires	Magnet Wand
Gearhead Greta	Jet Thrusters	Rocket Boots	Right-handed	Blue Neon Strips	Rust Spray
Widget Wendy	Sonic Cannon	Shield Generator	Right-handed	Silver Antenna	Rust Spray

CLUE 1 Addition

Technician Nova found extra batteries in the charging station. She added the totals to unlock the first clue.

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

6528 2951 7857 7797 5864 6172 6172 3770 5864 5523 6800 7570 7857 3841 5523 7570 6528

5312 3841 7857 5586 7570 8773 4654 7857 5586 5864 7857 6172 6800 3841

$$4503 + 2025 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$2694 + 2618 = \boxed{} \rightarrow \boxed{\text{U}}$$

$$1703 + 1248 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$3202 + 1452 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$5192 + 2665 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$2455 + 4345 = \boxed{} \rightarrow \boxed{\mathbf{D}}$$

$$1845 + 3678 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$3035 + 5738 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$1973 + 1868 = \boxed{} \rightarrow \boxed{\mathbf{S}}$$

$$2420 + 3444 = \boxed{} \rightarrow \boxed{\text{I}}$$

$1744 + 3842 = \boxed{} \rightarrow \boxed{\text{F}}$

$$3673 + 4124 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$2515 + 5055 = \boxed{} \rightarrow \boxed{0}$$

$1403 + 2367 = \boxed{} \rightarrow \boxed{\mathbf{A}}$

$$4216 + 1956 = \boxed{} \rightarrow \boxed{\text{L}}$$

Scratch space:

Subtraction

The main generator lost energy after the rogue bot struck. Nova subtracted the missing power units to reveal a code.

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

$$10492 - 2244 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$7563 - 1939 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$2933 - 1837 = \boxed{} \rightarrow \boxed{0}$$

$12543 - 3856 = \boxed{} \rightarrow \boxed{\text{U}}$

$$4175 - 2586 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$2100 - 1028 = \boxed{} \rightarrow \boxed{\mathbf{N}}$$

$7622 - 3563 = \boxed{} \rightarrow \boxed{} \mid \boxed{}$

$4553 - 651 = \boxed{} \rightarrow \mathbf{F}$

$5405 - 4352 = \boxed{} \rightarrow \mathbf{D}$

$$7101 - 3697 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$7588 - 4948 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$3199 - 1575 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$9843 - 1643 = \boxed{} \rightarrow \boxed{\mathbf{V}}$$

$$4686 - 3157 = \boxed{} \rightarrow \boxed{\text{E}}$$

$10026 - 1335 = \boxed{} \rightarrow \boxed{\mathbf{G}}$

$$10060 - 4111 = \boxed{} \rightarrow \boxed{\text{L}}$$

Scratch space:

Multiplication facts (1-12)

Nova noticed equal rows of microchips stacked inside the mainframe. Multiplying the rows uncovered a secret log.

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

[illegible]

$12 \times 10 = \boxed{} \rightarrow \boxed{\text{T}}$

$10 \times 6 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$4 \times 5 = \boxed{} \rightarrow \boxed{0}$$

$3 \times 12 = \boxed{} \rightarrow \boxed{\text{H}}$

$5 \times 9 = \boxed{} \rightarrow \boxed{\mathbf{E}}$

$8 \times 2 = \boxed{} \rightarrow \boxed{\text{P}}$

$11 \times 6 = \boxed{} \rightarrow \boxed{\mathbf{N}}$

$$7 \times 2 = \boxed{} \rightarrow \boxed{\mathbf{W}}$$

$$10 \times 8 = \boxed{} \rightarrow \boxed{\text{R}}$$

$3 \times 7 = \square \rightarrow \boxed{\mathbf{Y}}$

$11 \times 4 = \boxed{} \rightarrow \boxed{\text{L}}$

$11 \times 12 = \boxed{} \rightarrow \boxed{\text{D}}$

$7 \times 6 = \square \rightarrow \boxed{\mathbf{S}}$

$10 \times 11 = \square \rightarrow \square$

$8 \times 7 = \square \rightarrow \boxed{\mathbf{U}}$

$10 \times 10 = \boxed{} \rightarrow \boxed{\mathbf{V}}$

$5 \times 6 = \boxed{} \rightarrow \boxed{\text{A}}$

Scratch space:

Fractions of a number

Only a fraction of the security cameras were still online. Nova calculated that fraction to read the security report.

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

40 23 8 16 25 29 14 31 15 13 27 29 8 40 14 6 29 14 14 40

38 40 31 30 16 4 14 5 40 6 6 11 29 31 32 29 14 29

$2/8$ of 160 = $\rightarrow$ **A**

$2/10$ of $20 = \boxed{} \rightarrow \boxed{\text{U}}$

$2/8$ of 116 = $\rightarrow$ **E**

$3/10$ of 90 = $\rightarrow$ **V**

$2/4$ of 50 = $\rightarrow$ **K**

$\frac{1}{3}$ of 96 = $\rightarrow$ **C**

$2/8$ of 120 = $\rightarrow$ **F**

$2/5$ of 20 = $\rightarrow$ **R**

$\frac{1}{4}$ of 20 = $\rightarrow$ **D**

$2/4$ of 46 = $\rightarrow$ **B**

$1/6 \text{ of } 96 = \boxed{} \rightarrow \boxed{0}$

$\frac{1}{5}$ of 190 = $\rightarrow$ **W**

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

2/6 of 33 = → **H**

7/10 of 20 = → **N**

$$2/10 \text{ of } 65 = \boxed{} \rightarrow \boxed{\text{L}}$$

$\frac{1}{4}$ of 124 = $\rightarrow$ **S**

$3/6$ of $30 = \square \rightarrow \square$

Scratch space:

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

The diagnostic data was split evenly across the backup servers. Dividing the files unlocked the final detail.

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:

$60 \div 5 = \boxed{}$

$10 \div 1 = \boxed{}$

$42 \div 7 = \boxed{}$

$8 \div 2 = \boxed{}$

$45 \div 5 = \boxed{}$

$55 \div 5 = \boxed{}$

$36 \div 12 = \boxed{}$

$21 \div 3 = \boxed{}$

$16 \div 2 = \boxed{}$

$8 \div 4 = \boxed{}$

$10 \div 10 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain shatter the glass control box, then deflect the guard darts.
2. The villain shut down the security lights, then deflect the guard darts.
3. The villain shatter the glass control box, then power up the runaway cart.
4. The villain scale the factory wall, then block the alarm lasers.
5. The villain zoom over the security fence, then block the alarm lasers.
6. The villain slice through the vault lock, then power up the runaway cart.
7. The villain slice through the vault lock, then recharge their energy core.
8. The villain shatter the glass control box, then recharge their energy core.
9. The villain scale the factory wall, then deflect the guard darts.
10. The villain zoom over the security fence, then fly up to the ceiling vent.
11. The villain scale the factory wall, then power up the runaway cart.
12. The villain shut down the security lights, then fly up to the ceiling vent.

Answer Key

The Case of the Rogue Robot

Culprit: Sensor Seth

Jet Thrusters · Shield Generator · Left-handed · Silver Antenna · Rust Spray

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

Clue 1 (Addition): "THE VILLAIN DOES NOT USE FORCE FIELDS"

$4503 + 2025 = 6528$ (T) · $2694 + 2618 = 5312$ (U) · $1703 + 1248 = 2951$ (H) · $3202 + 1452 = 4654$ (C) · $5192 + 2665 = 7857$ (E) · $2455 + 4345 = 6800$ (D) · $1845 + 3678 = 5523$ (N) · $3035 + 5738 = 8773$ (R) · $1973 + 1868 = 3841$ (S) · $2420 + 3444 = 5864$ (I) · $1744 + 3842 = 5586$ (F) · $3673 + 4124 = 7797$ (V) · $2515 + 5055 = 7570$ (O) · $1403 + 2367 = 3770$ (A) · $4216 + 1956 = 6172$ (L)

Clue 2 (Subtraction): "THE VILLAIN WAS SPOTTED USING A LEFT HAND"

$10492 - 2244 = 8248$ (T) · $7563 - 1939 = 5624$ (S) · $2933 - 1837 = 1096$ (O) · $12543 - 3856 = 8687$ (U) · $4175 - 2586 = 1589$ (A) · $2100 - 1028 = 1072$ (N) · $7622 - 3563 = 4059$ (I) · $4553 - 651 = 3902$ (F) · $5405 - 4352 = 1053$ (D) · $7101 - 3697 = 3404$ (P) · $7588 - 4948 = 2640$ (W) · $3199 - 1575 = 1624$ (H) · $9843 - 1643 = 8200$ (V) · $4686 - 3157 = 1529$ (E) · $10026 - 1335 = 8691$ (G) · $10060 - 4111 = 5949$ (L)

Clue 3 (Multiplication facts (1-12)): "THE VILLAIN WAS STOPPED BY A RUST SPRAY"

$12 \times 10 = 120$ (T) · $10 \times 6 = 60$ (B) · $4 \times 5 = 20$ (O) · $3 \times 12 = 36$ (H) · $5 \times 9 = 45$ (E) · $8 \times 2 = 16$ (P) · $11 \times 6 = 66$ (N) · $7 \times 2 = 14$ (W) · $10 \times 8 = 80$ (R) · $3 \times 7 = 21$ (Y) · $11 \times 4 = 44$ (L) · $11 \times 12 = 132$ (D) · $7 \times 6 = 42$ (S) · $10 \times 11 = 110$ (I) · $8 \times 7 = 56$ (U) · $10 \times 10 = 100$ (V) · $5 \times 6 = 30$ (A)

Clue 4 (Fractions of a number): "A BROKEN SILVER ANTENNA WAS FOUND AT THE SCENE"

$\frac{2}{8}$ of 160 = 40 (A) · $\frac{2}{10}$ of 20 = 4 (U) · $\frac{2}{8}$ of 116 = 29 (E) · $\frac{3}{10}$ of 90 = 27 (V) · $\frac{2}{4}$ of 50 = 25 (K) · $\frac{1}{3}$ of 96 = 32 (C) · $\frac{2}{8}$ of 120 = 30 (F) · $\frac{2}{5}$ of 20 = 8 (R) · $\frac{1}{4}$ of 20 = 5 (D) · $\frac{2}{4}$ of 46 = 23 (B) · $\frac{1}{6}$ of 96 = 16 (O) · $\frac{1}{5}$ of 190 = 38 (W) · $\frac{6}{8}$ of 8 = 6 (T) · $\frac{2}{6}$ of 33 = 11 (H) · $\frac{7}{10}$ of 20 = 14 (N) · $\frac{2}{10}$ of 65 = 13 (L) · $\frac{1}{4}$ of 124 = 31 (S) · $\frac{3}{6}$ of 30 = 15 (I)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Sensor Seth

$60 \div 5 = 12$ · $10 \div 1 = 10$ · $42 \div 7 = 6$ · $8 \div 2 = 4$ · $45 \div 5 = 9$ · $55 \div 5 = 11$ · $36 \div 12 = 3$ · $21 \div 3 = 7$ · $16 \div 2 = 8$ · $8 \div 4 = 2$ · $10 \div 10 = 1$