



The Mystery of the Glitch Bot

Grade 4 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ Date: _____

Someone scrambled the master schematics at Gearopolis Repair Bay! Chief Mechanic Maya needs your help decoding encrypted logs to find the Rogue Bot before the big robot parade.

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 Bot is _____

Possible suspects

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

NAME	MAIN TOOL	GADGET	ANTENNA SIDE	HEAD WIRING	SYSTEM VULNERABILITY
Gears	Sonic Blaster	Turbo Boost	Right Antenna	Fiber Cables	Rust Powder
Copper	Laser Welder	Thermal Shield	Left Antenna	Fiber Cables	Rust Powder
Sparky	Plasma Cutter	Turbo Boost	Left Antenna	Steel Mesh	Magnet Attack
Rossum	Plasma Cutter	Thermal Shield	Right Antenna	Fiber Cables	Rust Powder
Asimov	Rocket Thruster	Thermal Shield	Left Antenna	Steel Mesh	Rust Powder
Tesla	Magnetic Claw	Oil Cannon	Right Antenna	Steel Mesh	Magnet Attack
Ada	Sonic Blaster	Turbo Boost	Left Antenna	Steel Mesh	Rust Powder
Orbit	Plasma Cutter	Oil Cannon	Right Antenna	Copper Wires	Water Splash
Rusty	Plasma Cutter	Oil Cannon	Right Antenna	Steel Mesh	Rust Powder
Edison	Rocket Thruster	Oil Cannon	Left Antenna	Fiber Cables	Rust Powder
Radar	Plasma Cutter	Turbo Boost	Left Antenna	Steel Mesh	Rust Powder
Bolt	Rocket Thruster	Cloaking Chip	Left Antenna	Steel Mesh	Rust Powder
Widget	Magnetic Claw	Cloaking Chip	Left Antenna	Steel Mesh	Magnet Attack
Sprocket	Laser Welder	Solar Panel	Left Antenna	Copper Wires	Magnet Attack
Isaac	Magnetic Claw	Oil Cannon	Left Antenna	Copper Wires	Rust Powder
Titan	Laser Welder	Oil Cannon	Left Antenna	Steel Mesh	Rust Powder
Turing	Laser Welder	Oil Cannon	Right Antenna	Copper Wires	Magnet Attack
Beep	Sonic Blaster	Solar Panel	Left Antenna	Fiber Cables	Rust Powder
Norbert	Laser Welder	Cloaking Chip	Left Antenna	Steel Mesh	Magnet Attack
Circuit	Magnetic Claw	Thermal Shield	Right Antenna	Steel Mesh	Rust Powder
Axel	Plasma Cutter	Thermal Shield	Left Antenna	Steel Mesh	Rust Powder

CLUE 1
Multiplication facts (1-12)

Maya finds stacks of microchips organized in equal rows across the lab bench.

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

T 54	110	40	90	4	1	45	40	60	4	T 54	96	4	40	16	81	4	T 54
45	16	40	T 54	45	90	60	4	60	4	4	16	T 54					

$9 \times 6 = \square \rightarrow \text{T}$	$2 \times 8 = \square \rightarrow \text{S}$	$4 \times 1 = \square \rightarrow \text{O}$
$11 \times 10 = \square \rightarrow \text{H}$	$9 \times 9 = \square \rightarrow \text{N}$	$10 \times 9 = \square \rightarrow \text{R}$
$10 \times 4 = \square \rightarrow \text{E}$	$12 \times 5 = \square \rightarrow \text{B}$	$1 \times 1 = \square \rightarrow \text{G}$
$12 \times 8 = \square \rightarrow \text{D}$	$9 \times 5 = \square \rightarrow \text{U}$	

Scratch space:

CLUE 2 Rounding

A flickering sensor screen shows a loose energy count rounded to the nearest hundred.

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

A									A		A			
170	290	2900	4300	200	2000	70	70	70	170	290	170	7000	90	4300

7000	2000	200	5000	2900	200	2300	2900	4300	70	3000	2000	700	4300	

A						A
170	200	4300	2000	200	200	170

Round 173 to the nearest ten → **A**

Round 74 to the nearest ten → **S**

Round 87 to the nearest ten → **O**

Round 4,252 to the nearest hundred → **T**

Round 7,236 to the nearest thousand → **B**

Round 673 to the nearest hundred → **F**

Round 5,323 to the nearest thousand → **D**

Round 2,440 to the nearest thousand → **E**

Round 2,955 to the nearest thousand → **L**

Round 2,917 to the nearest hundred → **I**

Round 218 to the nearest hundred → **N**

Round 291 to the nearest ten → **W**

Round 2,293 to the nearest hundred → **G**

Scratch space:

CLUE 3

You combine the battery counts from three storage boxes to check total power reserves.

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

Diagram showing the arrangement of 18 numbered boxes in three rows. The boxes are numbered 1 to 18. The boxes containing the letter 'T' are 1, 6, 11, and 15.

1 8574	2 6436	3 4418	4 2129	5 6596	6 8574	7 2365	8 6083	9 4418	10 4418	11 9500	12 7857	13 8519	14 6436	15 6164	16 5741
17 4124	18 5728	19 7856	20 8574	21 5015	22 6596	23 7227	24 5741	25 4418	26 4124	27 6596	28 7857	29 9500	30 8574	31 7856	
32 3772	33 6596	34 9500	35 7857	36 8574	37 7856										

$$4946 + 3628 = \boxed{} \rightarrow \boxed{\text{T}}$$

$1604 + 3411 = \boxed{} \rightarrow \boxed{\text{P}}$

$2561 + 3603 = \boxed{} \rightarrow \boxed{\text{A}}$

$2369 + 5488 = \boxed{} \rightarrow \boxed{\text{N}}$

$$3050 + 4806 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$2116 + 3625 = \boxed{} \rightarrow \boxed{\mathbf{D}}$$

$1095 + 1034 = \boxed{} \rightarrow \boxed{\mathbf{B}}$

$$2913 + 4314 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$4068 + 5432 = \boxed{} \rightarrow \boxed{}$$

$$2200 + 3528 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

$$1324 + 2800 = \boxed{} \rightarrow \mathbf{R}$$

$2882 + 1536 = \boxed{} \rightarrow \boxed{\text{E}}$

$1937 + 1835 = \boxed{} \rightarrow \boxed{\mathbf{J}}$

$$2388 + 4208 = \boxed{} \rightarrow \boxed{\mathbf{0}}$$

$$3607 + 4912 = \boxed{} \rightarrow \boxed{\mathbf{G}}$$

$$2230 + 4206 = \boxed{} \rightarrow \boxed{\text{H}}$$

$1481 + 884 = \boxed{} \rightarrow \boxed{\mathbf{F}}$

$$3839 + 2244 = \boxed{} \rightarrow \boxed{\text{L}}$$

Scratch space:

CLUE 4

Subtraction

Comparing energy levels before and after the glitch reveals how much power was drained.

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

A				A													
1793	4828	8459	5832	1793	5071	1780	5932	4828	1715	4629	4629	2439	5607	4629	4828	1540	

	A			A						A		A			
4662	1793	4828	8459	1793	5259	3962	1540	1715	1780	4285	1793	4285	1793	2588	2439

$5707 - 3914 = \square \rightarrow \mathbf{A}$

$6485 - 3897 = \square \rightarrow \mathbf{I}$

$9286 - 3354 = \square \rightarrow \mathbf{F}$

$5622 - 363 = \square \rightarrow \mathbf{U}$

$3186 - 747 = \square \rightarrow \mathbf{L}$

$8113 - 2281 = \square \rightarrow \mathbf{R}$

$5878 - 1249 = \square \rightarrow \mathbf{E}$

$9223 - 3616 = \square \rightarrow \mathbf{M}$

$3284 - 1504 = \square \rightarrow \mathbf{O}$

$8830 - 3759 = \square \rightarrow \mathbf{P}$

$9081 - 622 = \square \rightarrow \mathbf{C}$

$6856 - 2571 = \square \rightarrow \mathbf{N}$

$8422 - 4460 = \square \rightarrow \mathbf{G}$

$2235 - 695 = \square \rightarrow \mathbf{H}$

$4651 - 2936 = \square \rightarrow \mathbf{T}$

$6298 - 1470 = \square \rightarrow \mathbf{S}$

$8901 - 4239 = \square \rightarrow \mathbf{W}$

Scratch space:

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

The mechanic splits extra spare fuses equally among the remaining repair docks.

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:

$7 \div 1 = \boxed{}$

$80 \div 8 = \boxed{}$

$63 \div 7 = \boxed{}$

$20 \div 4 = \boxed{}$

$5 \div 5 = \boxed{}$

$44 \div 11 = \boxed{}$

$33 \div 11 = \boxed{}$

$56 \div 7 = \boxed{}$

$24 \div 2 = \boxed{}$

$12 \div 6 = \boxed{}$

$44 \div 4 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain blasted a sonic beam, then turned on a cloaking chip.
2. The villain blasted a sonic beam, then squirted an oil cannon.
3. The villain sliced with a plasma cutter, then turned on a cloaking chip.
4. The villain fired a laser welder, then charged a solar panel.
5. The villain fired a laser welder, then raised a thermal shield.
6. The villain zoomed on a rocket thruster, then turned on a cloaking chip.
7. The villain sliced with a plasma cutter, then raised a thermal shield.
8. The villain zoomed on a rocket thruster, then charged a solar panel.
9. The villain zoomed on a rocket thruster, then raised a thermal shield.
10. The villain fired a laser welder, then squirted an oil cannon.
11. The villain grabbed with a magnetic claw, then activated a turbo boost.
12. The villain grabbed with a magnetic claw, then turned on a cloaking chip.

Answer Key

The Mystery of the Glitch Bot

Culprit: Bolt

Rocket Thruster · Cloaking Chip · Left Antenna · Steel Mesh · Rust Powder

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 8 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE ROGUE BOT DOES NOT USE TURBO BOOST"

$9 \times 6 = 54$ (T) · $2 \times 8 = 16$ (S) · $4 \times 1 = 4$ (O) · $11 \times 10 = 110$ (H) · $9 \times 9 = 81$ (N) · $10 \times 9 = 90$ (R) · $10 \times 4 = 40$ (E) · $12 \times 5 = 60$ (B) · $1 \times 1 = 1$ (G) · $12 \times 8 = 96$ (D) · $9 \times 5 = 45$ (U)

Clue 2 (Rounding): "A WITNESS SAW A BOT BENDING ITS LEFT ANTENNA"

Round 173 to the nearest ten = 170 (A) · Round 74 to the nearest ten = 70 (S) · Round 87 to the nearest ten = 90 (O) · Round 4,252 to the nearest hundred = 4300 (T) · Round 7,236 to the nearest thousand = 7000 (B) · Round 673 to the nearest hundred = 700 (F) · Round 5,323 to the nearest thousand = 5000 (D) · Round 2,440 to the nearest thousand = 2000 (E) · Round 2,955 to the nearest thousand = 3000 (L) · Round 2,917 to the nearest hundred = 2900 (I) · Round 218 to the nearest hundred = 200 (N) · Round 291 to the nearest ten = 290 (W) · Round 2,293 to the nearest hundred = 2300 (G)

Clue 3 (Addition): "THE BOT FLEEING HAD RUST POWDER ON ITS JOINTS"

$4946 + 3628 = 8574$ (T) · $1604 + 3411 = 5015$ (P) · $2561 + 3603 = 6164$ (A) · $2369 + 5488 = 7857$ (N) · $3050 + 4806 = 7856$ (S) · $2116 + 3625 = 5741$ (D) · $1095 + 1034 = 2129$ (B) · $2913 + 4314 = 7227$ (W) · $4068 + 5432 = 9500$ (I) · $2200 + 3528 = 5728$ (U) · $1324 + 2800 = 4124$ (R) · $2882 + 1536 = 4418$ (E) · $1937 + 1835 = 3772$ (J) · $2388 + 4208 = 6596$ (O) · $3607 + 4912 = 8519$ (G) · $2230 + 4206 = 6436$ (H) · $1481 + 884 = 2365$ (F) · $3839 + 2244 = 6083$ (L)

Clue 4 (Subtraction): "A SCRAP OF STEEL MESH WAS CAUGHT ON A NAIL"

$5707 - 3914 = 1793$ (A) · $6485 - 3897 = 2588$ (I) · $9286 - 3354 = 5932$ (F) · $5622 - 363 = 5259$ (U) · $3186 - 747 = 2439$ (L) · $8113 - 2281 = 5832$ (R) · $5878 - 1249 = 4629$ (E) · $9223 - 3616 = 5607$ (M) · $3284 - 1504 = 1780$ (O) · $8830 - 3759 = 5071$ (P) · $9081 - 622 = 8459$ (C) · $6856 - 2571 = 4285$ (N) · $8422 - 4460 = 3962$ (G) · $2235 - 695 = 1540$ (H) · $4651 - 2936 = 1715$ (T) · $6298 - 1470 = 4828$ (S) · $8901 - 4239 = 4662$ (W)

Clue 5 (Division facts (1-12)): surviving statement is box 6 → Bolt

$7 \div 1 = 7$ · $80 \div 8 = 10$ · $63 \div 7 = 9$ · $20 \div 4 = 5$ · $5 \div 5 = 1$ · $44 \div 11 = 4$ · $33 \div 11 = 3$ · $56 \div 7 = 8$ · $24 \div 2 = 12$ · $12 \div 6 = 2$ · $44 \div 4 = 11$