



The Runaway Bot

Grade 5 math · Fractions of a number, Order of operations, Multiplication, Rounding, Division · Reading level grades 3-4

Detective: _____ Date: _____

A sneaky robot has stolen the golden wrench from the Chief Inventor! The factory is in lockdown, and we need to decode the clues to find the rogue machine.

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	MAIN TOOL	SUB-SYSTEM	FAULTY PART	HEAD ANTENNA	DISABLING TOOL
Tracker	Hologram-throwing	Code-scrambling	Blinking eye	Blue copper wire	Sticky rust-remover
Gearbox	Magnetic-pulling	Oil-spraying	Squeaky joint	Green steel coil	Sticky rust-remover
Bender	Hologram-throwing	Oil-spraying	Blinking eye	Green steel coil	High-frequency whistle
Widget	Jet-boosting	Bolt-launching	Blinking eye	Green steel coil	Sticky rust-remover
Gizmo	Metal-crushing	Sonar-pinging	Squeaky joint	Blue copper wire	Strong magnet toy
Socket	Jet-boosting	Code-scrambling	Blinking eye	Blue copper wire	High-frequency whistle
Bolt	Magnetic-pulling	Sonar-pinging	Blinking eye	Blue copper wire	High-frequency whistle
Beeper	Magnetic-pulling	Sonar-pinging	Blinking eye	Green steel coil	High-frequency whistle
Megatron	Magnetic-pulling	Bolt-launching	Squeaky joint	Red brass loop	Sticky rust-remover
Rusty	Magnetic-pulling	Bolt-launching	Blinking eye	Blue copper wire	Strong magnet toy
Sprocket	Magnetic-pulling	Bolt-launching	Blinking eye	Blue copper wire	High-frequency whistle
Byte	Laser-welding	Oil-spraying	Blinking eye	Red brass loop	High-frequency whistle
Rodney	Jet-boosting	Oil-spraying	Squeaky joint	Blue copper wire	High-frequency whistle
Data	Magnetic-pulling	Bolt-launching	Squeaky joint	Red brass loop	Strong magnet toy
Wall-E	Jet-boosting	Oil-spraying	Squeaky joint	Red brass loop	Strong magnet toy
Hal	Metal-crushing	Bolt-launching	Squeaky joint	Green steel coil	High-frequency whistle
Astro	Magnetic-pulling	Oil-spraying	Squeaky joint	Blue copper wire	Strong magnet toy
Optimus	Metal-crushing	Code-scrambling	Blinking eye	Blue copper wire	Strong magnet toy
Sparky	Hologram-throwing	Sonar-pinging	Blinking eye	Blue copper wire	High-frequency whistle
Micro	Jet-boosting	Wire-clipping	Blinking eye	Blue copper wire	High-frequency whistle
Vector	Laser-welding	Bolt-launching	Squeaky joint	Blue copper wire	Strong magnet toy

CLUE 1 Fractions of a number

The computer lab has twelve repair pods. Only a fraction of them are powered up. Find this fraction to boot up the scanner.

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

The diagram shows two rows of boxes, each with a number below it. The top row has 15 boxes, and the bottom row has 10 boxes. Some boxes are shaded orange and contain the letter 'T', while others are white and empty.

Top row (15 boxes):

- Box 1: Orange, contains 'T', number 24
- Box 2: White, empty, number 32
- Box 3: White, empty, number 20
- Box 4: White, empty, number 12
- Box 5: White, empty, number 31
- Box 6: White, empty, number 40
- Box 7: White, empty, number 31
- Box 8: Orange, contains 'T', number 24
- Box 9: White, empty, number 38
- Box 10: White, empty, number 31
- Box 11: White, empty, number 20
- Box 12: White, empty, number 11
- Box 13: White, empty, number 28
- Box 14: White, empty, number 31
- Box 15: Orange, contains 'T', number 24

Bottom row (10 boxes):

- Box 1: White, empty, number 13
- Box 2: White, empty, number 22
- Box 3: White, empty, number 2
- Box 4: White, empty, number 28
- Box 5: White, empty, number 4
- Box 6: White, empty, number 32
- Box 7: White, empty, number 40
- Box 8: White, empty, number 31
- Box 9: White, empty, number 13
- Box 10: Orange, contains 'T', number 24

6/8 of 32 = → **T**

$4/6$ of $60 = \boxed{} \rightarrow \boxed{\text{B}}$

$2/10$ of 160 = $\rightarrow$ **H**

$1/10 \text{ of } 120 = \boxed{} \rightarrow \boxed{\text{R}}$

$1/5$ of 110 = $\rightarrow$ **A**

$$2/5 \text{ of } 70 = \boxed{} \rightarrow \boxed{\text{N}}$$

4/8 of 22 = → **S**

$$4/6 \text{ of } 30 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$2/4 \text{ of } 4 = \boxed{} \rightarrow \boxed{\mathbf{U}}$$

$4/6$ of $57 = \boxed{} \rightarrow \boxed{\text{D}}$

$1/5$ of 155 = $\rightarrow$

$\frac{1}{6}$ of 24 = $\rightarrow$ **C**

$$2/4 \text{ of } 26 = \boxed{} \rightarrow \boxed{\text{L}}$$

Scratch space:

CLUE 2

Order of operations

We found a scrambled keycard. Follow the exact order of steps to solve the equation and unlock the card.

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

A																	
74	55	25	13	9	24	42	55	6	13	26	66	13	26	9	79	33	79

	A				
51	74	69	69	79	79

$12 \times 8 - 22 = \square \rightarrow \boxed{\text{A}}$

$65 + 2 \times 2 = \square \rightarrow \boxed{\text{S}}$

$10 \times 9 - 11 = \square \rightarrow \boxed{\text{E}}$

$11 \times 5 - 22 = \square \rightarrow \boxed{\text{Y}}$

$11 \times 6 - 11 = \square \rightarrow \boxed{\text{B}}$

$12 \times 3 - 11 = \square \rightarrow \boxed{\text{R}}$

$2 \times 4 - 2 = \square \rightarrow \boxed{\text{L}}$

$4 \times 5 - 11 = \square \rightarrow \boxed{\text{G}}$

$8 \times 6 - 6 = \square \rightarrow \boxed{\text{T}}$

$56 + 5 \times 2 = \square \rightarrow \boxed{\text{K}}$

$2 + 3 \times 8 = \square \rightarrow \boxed{\text{N}}$

$3 + 5 \times 2 = \square \rightarrow \boxed{\text{I}}$

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

$9 \times 6 - 3 = \square \rightarrow \boxed{\text{W}}$

Scratch space:

CLUE 3

Multiplication facts (1-12)

A grid of battery racks lines the wall. Count the rows and columns to find how much power we have.

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

B															
4	49	60	8	6	20	16	49	60	21	28	20	15	48	20	
121	96	16	27	21	16	66	14	7	8	20	15	35	6	49	16

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

$5 \times 7 = \square \rightarrow \text{S}$

$7 \times 1 = \square \rightarrow \text{Y}$

$2 \times 3 = \square \rightarrow \text{T}$

$7 \times 7 = \square \rightarrow \text{L}$

$3 \times 5 = \square \rightarrow \text{I}$

$2 \times 10 = \square \rightarrow \text{H}$

$10 \times 6 = \square \rightarrow \text{O}$

$12 \times 4 = \square \rightarrow \text{G}$

$7 \times 3 = \square \rightarrow \text{U}$

$3 \times 9 = \square \rightarrow \text{Q}$

$7 \times 4 = \square \rightarrow \text{D}$

$11 \times 11 = \square \rightarrow \text{F}$

$6 \times 11 = \square \rightarrow \text{N}$

$4 \times 4 = \square \rightarrow \text{E}$

$7 \times 2 = \square \rightarrow \text{C}$

$8 \times 1 = \square \rightarrow \text{W}$

$8 \times 12 = \square \rightarrow \text{R}$

Scratch space:

CLUE 4
Rounding

The motion radar is blurry. It only shows numbers rounded to the nearest ten. Round the signal to find the zone.

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

T							T											
90	110	170	2000	30	170	1300	90	2300	1100	30	300	170	230	7000	3700	3700	170	130

370	70	130	170

Round 92 to the nearest ten → **T**

Round 113 to the nearest ten → **H**

Round 173 to the nearest ten → **E**

Round 367 to the nearest ten → **W**

Round 1,110 to the nearest hundred → **B**

Round 232 to the nearest ten → **C**

Round 132 to the nearest ten → **R**

Round 6,517 to the nearest thousand → **O**

Round 1,751 to the nearest thousand → **Y**

Round 297 to the nearest hundred → **U**

Round 30 to the nearest ten → **L**

Round 1,251 to the nearest hundred → **F**

Round 67 to the nearest ten → **I**

Round 3,723 to the nearest hundred → **P**

Round 2,292 to the nearest hundred → **A**

Scratch space:

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

We need to divide our scout bots into equal teams to search the corridors. Group them up to find the route.

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:

$80 \div 8 = \boxed{}$

$36 \div 4 = \boxed{}$

$4 \div 1 = \boxed{}$

$30 \div 6 = \boxed{}$

$36 \div 3 = \boxed{}$

$48 \div 6 = \boxed{}$

$2 \div 2 = \boxed{}$

$3 \div 1 = \boxed{}$

$12 \div 6 = \boxed{}$

$36 \div 6 = \boxed{}$

$70 \div 10 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain points its laser scanner, then fires rusty bolts at the wall.
2. The villain lifts the heavy steel door, then fires rusty bolts at the wall.
3. The villain activates its turbo thrusters, then fires rusty bolts at the wall.
4. The villain points its laser scanner, then clips the emergency power wires.
5. The villain zaps the mainframe panel, then sends a loud radar signal.
6. The villain activates its turbo thrusters, then clips the emergency power wires.
7. The villain spins its metal gears, then fires rusty bolts at the wall.
8. The villain spins its metal gears, then scrambles the security computer.
9. The villain lifts the heavy steel door, then sends a loud radar signal.
10. The villain points its laser scanner, then scrambles the security computer.
11. The villain spins its metal gears, then sends a loud radar signal.
12. The villain zaps the mainframe panel, then clips the emergency power wires.

Answer Key

The Runaway Bot

Culprit: Sparky

Hologram-throwing · Sonar-pinging · Blinking eye · Blue copper wire · High-frequency whistle

Trail: Start 21 → Clue 1 14 → Clue 2 9 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Fractions of a number): "THE ROBOT DOES NOT LAUNCH BOLTS"

$\frac{6}{8}$ of 32 = 24 (T) · $\frac{4}{6}$ of 60 = 40 (B) · $\frac{2}{10}$ of 160 = 32 (H) · $\frac{1}{10}$ of 120 = 12 (R) · $\frac{1}{5}$ of 110 = 22 (A) · $\frac{2}{5}$ of 70 = 28 (N) · $\frac{4}{8}$ of 22 = 11 (S) · $\frac{4}{6}$ of 30 = 20 (E) · $\frac{2}{4}$ of 4 = 2 (U) · $\frac{4}{6}$ of 57 = 38 (D) · $\frac{1}{5}$ of 155 = 31 (O) · $\frac{1}{6}$ of 24 = 4 (C) · $\frac{2}{4}$ of 26 = 13 (L)

Clue 2 (Order of operations): "A BRIGHT BLINKING EYE WAS SEEN"

$12 \times 8 - 22 = 74$ (A) · $65 + 2 \times 2 = 69$ (S) · $10 \times 9 - 11 = 79$ (E) · $11 \times 5 - 22 = 33$ (Y) · $11 \times 6 - 11 = 55$ (B) · $12 \times 3 - 11 = 25$ (R) · $2 \times 4 - 2 = 6$ (L) · $4 \times 5 - 11 = 9$ (G) · $8 \times 6 - 6 = 42$ (T) · $56 + 5 \times 2 = 66$ (K) · $2 + 3 \times 8 = 26$ (N) · $3 + 5 \times 2 = 13$ (I) · $9 \times 3 - 3 = 24$ (H) · $9 \times 6 - 3 = 51$ (W)

Clue 3 (Multiplication facts (1-12)): "BLOW THE LOUD HIGH FREQUENCY WHISTLE"

$2 \times 2 = 4$ (B) · $5 \times 7 = 35$ (S) · $7 \times 1 = 7$ (Y) · $2 \times 3 = 6$ (T) · $7 \times 7 = 49$ (L) · $3 \times 5 = 15$ (I) · $2 \times 10 = 20$ (H) · $10 \times 6 = 60$ (O) · $12 \times 4 = 48$ (G) · $7 \times 3 = 21$ (U) · $3 \times 9 = 27$ (Q) · $7 \times 4 = 28$ (D) · $11 \times 11 = 121$ (F) · $6 \times 11 = 66$ (N) · $4 \times 4 = 16$ (E) · $7 \times 2 = 14$ (C) · $8 \times 1 = 8$ (W) · $8 \times 12 = 96$ (R)

Clue 4 (Rounding): "THEY LEFT A BLUE COPPER WIRE"

Round 92 to the nearest ten = 90 (T) · Round 113 to the nearest ten = 110 (H) · Round 173 to the nearest ten = 170 (E) · Round 367 to the nearest ten = 370 (W) · Round 1,110 to the nearest hundred = 1100 (B) · Round 232 to the nearest ten = 230 (C) · Round 132 to the nearest ten = 130 (R) · Round 6,517 to the nearest thousand = 7000 (O) · Round 1,751 to the nearest thousand = 2000 (Y) · Round 297 to the nearest hundred = 300 (U) · Round 30 to the nearest ten = 30 (L) · Round 1,251 to the nearest hundred = 1300 (F) · Round 67 to the nearest ten = 70 (I) · Round 3,723 to the nearest hundred = 3700 (P) · Round 2,292 to the nearest hundred = 2300 (A)

Clue 5 (Division facts (1-12)): surviving statement is box 11 → Sparky

$80 \div 8 = 10$ · $36 \div 4 = 9$ · $4 \div 1 = 4$ · $30 \div 6 = 5$ · $36 \div 3 = 12$ · $48 \div 6 = 8$ · $2 \div 2 = 1$ · $3 \div 1 = 3$ · $12 \div 6 = 2$ · $36 \div 6 = 6$ · $70 \div 10 = 7$