



# The Great Robo-Factory Heist

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

Detective: \_\_\_\_\_ Date: \_\_\_\_\_

The Golden Gear has been stolen from the Gearville Robo-Factory! A rogue bot snuck past the lasers and grabbed it. Help Detective Bolt scan the assembly line, solve the math puzzles, and find the thief before they rust away!

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     | PRIMARY TOOL   | BACKUP GEAR   | ACTIVE SENSOR    | HEAD ANTENNA | SYSTEM VULNERABILITY |
|----------|----------------|---------------|------------------|--------------|----------------------|
| Lovelace | Jet Thruster   | Search Light  | Right LED Blinks | Glass Dome   | Rust Spray           |
| Rusty    | Laser Welder   | Rocket Boots  | Right LED Blinks | Wire Mohawk  | Rust Spray           |
| Clank    | Laser Welder   | Rocket Boots  | Right LED Blinks | Dish Antenna | Rust Spray           |
| Baxter   | Jet Thruster   | Solar Charger | Right LED Blinks | Glass Dome   | Salt Water           |
| Hal      | Drill Arm      | Rocket Boots  | Right LED Blinks | Glass Dome   | Magnet Wand          |
| Gort     | Jet Thruster   | Plasma Shield | Left LED Blinks  | Glass Dome   | Salt Water           |
| Gizmo    | Mega Magnet    | Cargo Hook    | Right LED Blinks | Wire Mohawk  | Magnet Wand          |
| Zinc     | Drill Arm      | Rocket Boots  | Left LED Blinks  | Glass Dome   | Salt Water           |
| Bolt     | Sonic Screamer | Solar Charger | Right LED Blinks | Dish Antenna | Rust Spray           |
| Sprocket | Sonic Screamer | Rocket Boots  | Left LED Blinks  | Dish Antenna | Rust Spray           |
| Vector   | Mega Magnet    | Rocket Boots  | Right LED Blinks | Dish Antenna | Salt Water           |
| Digit    | Drill Arm      | Cargo Hook    | Right LED Blinks | Dish Antenna | Salt Water           |
| Sparky   | Laser Welder   | Solar Charger | Right LED Blinks | Dish Antenna | Magnet Wand          |
| Micro    | Sonic Screamer | Solar Charger | Right LED Blinks | Glass Dome   | Salt Water           |
| Turing   | Laser Welder   | Rocket Boots  | Left LED Blinks  | Wire Mohawk  | Magnet Wand          |
| Astro    | Sonic Screamer | Solar Charger | Left LED Blinks  | Wire Mohawk  | Rust Spray           |
| Robby    | Sonic Screamer | Cargo Hook    | Right LED Blinks | Glass Dome   | Salt Water           |
| Asimov   | Mega Magnet    | Plasma Shield | Right LED Blinks | Glass Dome   | Salt Water           |
| Brass    | Sonic Screamer | Solar Charger | Right LED Blinks | Wire Mohawk  | Rust Spray           |
| Cyber    | Jet Thruster   | Search Light  | Left LED Blinks  | Dish Antenna | Rust Spray           |
| Copper   | Laser Welder   | Rocket Boots  | Right LED Blinks | Glass Dome   | Salt Water           |

## CLUE 1 Rounding

The factory radar screen only shows rounded numbers for power usage. We need to round these signals to find the robot's main blueprint!

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

|              |             |             |             |             |             |             |             |             |             |              |             |             |             |             |             |              |             |             |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <div>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>T</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>T</div> | <div></div> | <div></div> |
| 500          | 30          | 8000        | 3000        | 7000        | 200         | 900         | 600         | 3000        | 600         | 500          | 50          | 7000        | 70          | 800         | 4000        | 500          | 30          | 8000        |
| <div></div>  | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div>  | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div>  | <div></div> | <div></div> |
| 90           | 50          | 7000        | 4000        | 6000        | 7000        | 4000        | 30          | 9000        | 8000        | 50           | 200         |             |             |             |             |              |             |             |

Round 529 to the nearest hundred  → 

T

Round 73 to the nearest ten  → 

C

Round 90 to the nearest ten  → 

P

Round 4,052 to the nearest thousand  → 

S

Round 54 to the nearest ten  → 

L

Round 9,104 to the nearest thousand  → 

I

Round 7,254 to the nearest thousand  → 

A

Round 779 to the nearest hundred  → 

K

Round 177 to the nearest hundred  → 

D

Round 896 to the nearest hundred  → 

R

Round 6,413 to the nearest thousand  → 

M

Round 2,694 to the nearest thousand  → 

B

Round 26 to the nearest ten  → 

H

Round 7,697 to the nearest thousand  → 

E

Round 637 to the nearest hundred  → 

O

Scratch space:

## CLUE 2 Addition

We found some spare gear piles near the assembly line. Let us add up the total parts to see which system was modified.

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| T   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 907 | 828 | 554 | 856 | 481 | 850 | 563 | 632 | 249 | 907 | 966 | 850 | 626 | 946 | 828 | 554 | 946 |

  

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| T   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 907 | 828 | 554 | 249 | 632 | 632 | 249 | 630 | 828 | 907 | 850 | 249 | 630 | 828 | 907 |  |  |

|                                            |                                            |                                            |
|--------------------------------------------|--------------------------------------------|--------------------------------------------|
| $441 + 466 = \square \rightarrow$ <b>T</b> | $351 + 203 = \square \rightarrow$ <b>E</b> | $471 + 379 = \square \rightarrow$ <b>L</b> |
| $394 + 552 = \square \rightarrow$ <b>S</b> | $415 + 441 = \square \rightarrow$ <b>C</b> | $194 + 436 = \square \rightarrow$ <b>G</b> |
| $560 + 406 = \square \rightarrow$ <b>F</b> | $109 + 140 = \square \rightarrow$ <b>I</b> | $365 + 261 = \square \rightarrow$ <b>A</b> |
| $303 + 178 = \square \rightarrow$ <b>U</b> | $199 + 364 = \square \rightarrow$ <b>P</b> | $420 + 212 = \square \rightarrow$ <b>R</b> |
| $293 + 535 = \square \rightarrow$ <b>H</b> |                                            |                                            |

Scratch space:

### CLUE 3 Subtraction

The energy vault lost a lot of battery juice during the break-in. We must subtract the leftover power to see what the robber took.

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

|              |             |             |             |              |             |             |             |             |              |             |             |             |             |             |             |             |             |
|--------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <div>S</div> | <div></div> | <div></div> | <div></div> | <div>S</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div>S</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 290          | 636         | 330         | 577         | 290          | 778         | 456         | 227         | 556         | 290          | 577         | 330         | 720         | 297         | 577         | 720         | 169         | 406         |

  

|              |             |             |             |              |             |             |             |             |             |             |             |             |             |
|--------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <div>S</div> | <div></div> | <div></div> | <div></div> | <div>S</div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> | <div></div> |
| 290          | 778         | 164         | 720         | 290          | 720         | 778         | 169         | 659         | 124         | 525         | 297         | 227         |             |

|                                                    |                                                    |                                                    |
|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|
| $642 - 352 = \square \rightarrow \boxed{\text{S}}$ | $902 - 182 = \square \rightarrow \boxed{\text{T}}$ | $619 - 392 = \square \rightarrow \boxed{\text{N}}$ |
| $406 - 76 = \square \rightarrow \boxed{\text{L}}$  | $297 - 133 = \square \rightarrow \boxed{\text{U}}$ | $670 - 93 = \square \rightarrow \boxed{\text{A}}$  |
| $537 - 81 = \square \rightarrow \boxed{\text{I}}$  | $896 - 237 = \square \rightarrow \boxed{\text{M}}$ | $810 - 32 = \square \rightarrow \boxed{\text{H}}$  |
| $698 - 142 = \square \rightarrow \boxed{\text{G}}$ | $320 - 151 = \square \rightarrow \boxed{\text{E}}$ | $613 - 88 = \square \rightarrow \boxed{\text{O}}$  |
| $371 - 247 = \square \rightarrow \boxed{\text{D}}$ | $498 - 201 = \square \rightarrow \boxed{\text{W}}$ | $588 - 182 = \square \rightarrow \boxed{\text{R}}$ |
| $810 - 174 = \square \rightarrow \boxed{\text{P}}$ |                                                    |                                                    |

Scratch space:

## CLUE 4

## Multiplication facts (1-12)

The security camera took pictures in groups of four. We can multiply the rows of photos to unlock the next file!

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

|    |    |   |    |    |    |     |    |    |    |    |   |   |    |     |   |    |  |
|----|----|---|----|----|----|-----|----|----|----|----|---|---|----|-----|---|----|--|
| A  |    |   |    |    |    |     |    |    |    | A  |   |   |    |     |   |    |  |
| 48 | 77 | 5 | 45 | 80 | 45 | 121 | 60 | 44 | 90 | 48 | 7 | 7 | 70 | 121 | 4 | 45 |  |

  

|    |    |   |    |     |    |    |    |     |    |    |    |  |
|----|----|---|----|-----|----|----|----|-----|----|----|----|--|
|    | A  |   |    |     |    |    |    |     |    |    |    |  |
| 72 | 48 | 7 | 60 | 121 | 50 | 12 | 70 | 100 | 45 | 14 | 45 |  |

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

$12 \times 6 = \square \rightarrow \text{W}$

$7 \times 11 = \square \rightarrow \text{P}$

$5 \times 10 = \square \rightarrow \text{U}$

$4 \times 1 = \square \rightarrow \text{M}$

$1 \times 5 = \square \rightarrow \text{I}$

$8 \times 10 = \square \rightarrow \text{C}$

$2 \times 6 = \square \rightarrow \text{N}$

$10 \times 9 = \square \rightarrow \text{L}$

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

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

$9 \times 5 = \square \rightarrow \text{E}$

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

$5 \times 12 = \square \rightarrow \text{F}$

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

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

$10 \times 7 = \square \rightarrow \text{D}$

Scratch space:

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

The oil canisters need to be shared equally among the robot guards. Let us divide the boxes to get the final clue!

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:**

$9 \div 1 = \boxed{\phantom{00}}$

$12 \div 1 = \boxed{\phantom{00}}$

$9 \div 3 = \boxed{\phantom{00}}$

$18 \div 3 = \boxed{\phantom{00}}$

$64 \div 8 = \boxed{\phantom{00}}$

$16 \div 8 = \boxed{\phantom{00}}$

$7 \div 7 = \boxed{\phantom{00}}$

$132 \div 12 = \boxed{\phantom{00}}$

$4 \div 1 = \boxed{\phantom{00}}$

$10 \div 1 = \boxed{\phantom{00}}$

$5 \div 1 = \boxed{\phantom{00}}$

**Step 2 - cross out the sentence with each answer:**

1. The villain pulls the metal door off with a mega magnet, then escapes into the sky with rocket boots.
2. The villain shatters the glass case with a sonic screamer, then blocks the alarm rays with a plasma shield.
3. The villain blasts open the vault with a laser welder, then escapes into the sky with rocket boots.
4. The villain pulls the metal door off with a mega magnet, then blocks the alarm rays with a plasma shield.
5. The villain tunnels through the concrete with a drill arm, then blocks the alarm rays with a plasma shield.
6. The villain shatters the glass case with a sonic screamer, then escapes into the sky with rocket boots.
7. The villain shatters the glass case with a sonic screamer, then powers up using a solar charger.
8. The villain flies into the laboratory with a jet thruster, then lifts the prize using a cargo hook.
9. The villain shatters the glass case with a sonic screamer, then lifts the prize using a cargo hook.
10. The villain blasts open the vault with a laser welder, then spots the exit path with a search light.
11. The villain tunnels through the concrete with a drill arm, then spots the exit path with a search light.
12. The villain flies into the laboratory with a jet thruster, then powers up using a solar charger.

# Answer Key

## The Great Robo-Factory Heist

### Culprit: Micro

Sonic Screamer · Solar Charger · Right LED Blinks · Glass Dome · Salt Water

Trail: Start 21 → Clue 1 19 → Clue 2 14 → Clue 3 6 → Clue 4 4 → Clue 5 1

### Clue 1 (Rounding): "THE BAD ROBOT LACKS THE PLASMA SHIELD"

Round 529 to the nearest hundred = 500 (T) · Round 73 to the nearest ten = 70 (C) · Round 90 to the nearest ten = 90 (P) · Round 4,052 to the nearest thousand = 4000 (S) · Round 54 to the nearest ten = 50 (L) · Round 9,104 to the nearest thousand = 9000 (I) · Round 7,254 to the nearest thousand = 7000 (A) · Round 779 to the nearest hundred = 800 (K) · Round 177 to the nearest hundred = 200 (D) · Round 896 to the nearest hundred = 900 (R) · Round 6,413 to the nearest thousand = 6000 (M) · Round 2,694 to the nearest thousand = 3000 (B) · Round 26 to the nearest ten = 30 (H) · Round 7,697 to the nearest thousand = 8000 (E) · Round 637 to the nearest hundred = 600 (O)

### Clue 2 (Addition): "THE CULPRIT FLASHES THEIR RIGHT LIGHT"

$441 + 466 = 907$  (T) ·  $351 + 203 = 554$  (E) ·  $471 + 379 = 850$  (L) ·  $394 + 552 = 946$  (S) ·  $415 + 441 = 856$  (C) ·  $194 + 436 = 630$  (G) ·  $560 + 406 = 966$  (F) ·  $109 + 140 = 249$  (I) ·  $365 + 261 = 626$  (A) ·  $303 + 178 = 481$  (U) ·  $199 + 364 = 563$  (P) ·  $420 + 212 = 632$  (R) ·  $293 + 535 = 828$  (H)

### Clue 3 (Subtraction): "SPLASHING SALT WATER SHUTS THEM DOWN"

$642 - 352 = 290$  (S) ·  $902 - 182 = 720$  (T) ·  $619 - 392 = 227$  (N) ·  $406 - 76 = 330$  (L) ·  $297 - 133 = 164$  (U) ·  $670 - 93 = 577$  (A) ·  $537 - 81 = 456$  (I) ·  $896 - 237 = 659$  (M) ·  $810 - 32 = 778$  (H) ·  $698 - 142 = 556$  (G) ·  $320 - 151 = 169$  (E) ·  $613 - 88 = 525$  (O) ·  $371 - 247 = 124$  (D) ·  $498 - 201 = 297$  (W) ·  $588 - 182 = 406$  (R) ·  $810 - 174 = 636$  (P)

### Clue 4 (Multiplication facts (1-12)): "A PIECE OF GLASS DOME WAS FOUND HERE"

$12 \times 4 = 48$  (A) ·  $12 \times 6 = 72$  (W) ·  $7 \times 11 = 77$  (P) ·  $5 \times 10 = 50$  (U) ·  $4 \times 1 = 4$  (M) ·  $1 \times 5 = 5$  (I) ·  $8 \times 10 = 80$  (C) ·  $2 \times 6 = 12$  (N) ·  $10 \times 9 = 90$  (L) ·  $11 \times 11 = 121$  (O) ·  $1 \times 7 = 7$  (S) ·  $9 \times 5 = 45$  (E) ·  $7 \times 2 = 14$  (R) ·  $5 \times 12 = 60$  (F) ·  $4 \times 11 = 44$  (G) ·  $10 \times 10 = 100$  (H) ·  $10 \times 7 = 70$  (D)

### Clue 5 (Division facts (1-12)): surviving statement is box 7 → Micro

$9 \div 1 = 9$  ·  $12 \div 1 = 12$  ·  $9 \div 3 = 3$  ·  $18 \div 3 = 6$  ·  $64 \div 8 = 8$  ·  $16 \div 8 = 2$  ·  $7 \div 7 = 1$  ·  $132 \div 12 = 11$  ·  $4 \div 1 = 4$  ·  $10 \div 1 = 10$  ·  $5 \div 1 = 5$