



# The Circuit City Caper

Grade 3 math · Multiplication, Skip counting, Word problems, Rounding, Missing addends · Reading level grades 3-4

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

A wild Glitch Bot has broken into the Central Core and scrambled the grid blueprints! The Chief Mechanic needs your help to scan the robotic suspects and find the culprit before the whole city powers down.

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 Glitch 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 GADGET | CLAW GRIP         | DOME WIRE COLOR | SYSTEM VULNERABILITY |
|-----------|----------------|---------------|-------------------|-----------------|----------------------|
| Volt      | rocket booster | shock wave    | Right clawed grip | blue wire       | magnet fields        |
| Hal       | magnet arm     | bubble shield | Left clawed grip  | orange wire     | water splashes       |
| Bumblebee | plasma torch   | solar panel   | Right clawed grip | blue wire       | dust bunnies         |
| Zippy     | rocket booster | oil slicker   | Left clawed grip  | blue wire       | dust bunnies         |
| Gizmo     | magnet arm     | decoy drone   | Left clawed grip  | blue wire       | magnet fields        |
| Tinman    | rocket booster | bubble shield | Right clawed grip | blue wire       | dust bunnies         |
| Clank     | laser welder   | decoy drone   | Right clawed grip | green wire      | magnet fields        |
| Astro     | magnet arm     | bubble shield | Right clawed grip | blue wire       | magnet fields        |
| Optimus   | magnet arm     | decoy drone   | Right clawed grip | blue wire       | water splashes       |
| Sparky    | sonic drill    | oil slicker   | Left clawed grip  | orange wire     | dust bunnies         |
| Baymax    | sonic drill    | bubble shield | Right clawed grip | orange wire     | magnet fields        |
| Rodney    | sonic drill    | shock wave    | Right clawed grip | blue wire       | magnet fields        |
| Gearbox   | magnet arm     | decoy drone   | Left clawed grip  | blue wire       | dust bunnies         |
| Sprocket  | sonic drill    | solar panel   | Right clawed grip | orange wire     | water splashes       |
| Rosie     | laser welder   | bubble shield | Left clawed grip  | orange wire     | magnet fields        |
| Piper     | sonic drill    | bubble shield | Left clawed grip  | blue wire       | dust bunnies         |
| Pixel     | rocket booster | solar panel   | Left clawed grip  | green wire      | magnet fields        |
| Beep      | magnet arm     | decoy drone   | Right clawed grip | orange wire     | dust bunnies         |
| Data      | rocket booster | decoy drone   | Left clawed grip  | blue wire       | dust bunnies         |
| Rusty     | sonic drill    | bubble shield | Left clawed grip  | blue wire       | water splashes       |
| Widget    | sonic drill    | shock wave    | Left clawed grip  | blue wire       | dust bunnies         |

## Multiplication facts (1-12)

To decrypt the security log, we must count the charging pods lined up in equal rows.

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

Diagram illustrating a sequence of numbers and their corresponding values in boxes. The boxes are arranged in two rows. The top row contains 15 boxes, and the bottom row contains 14 boxes. Some boxes are shaded orange and contain the letter 'T'.

Top Row (15 boxes):

- Box 1 (shaded orange, contains 'T'): 48
- Box 2: 30
- Box 3: 1
- Box 4: 60
- Box 5: 8
- Box 6: 42
- Box 7 (shaded orange, contains 'T'): 48
- Box 8: 55
- Box 9: 30
- Box 10: 70
- Box 11: 50
- Box 12 (shaded orange, contains 'T'): 48
- Box 13: 120
- Box 14: 50
- Box 15: 1
- Box 16: 21
- Box 17: 24
- Box 18: 50
- Box 19 (shaded orange, contains 'T'): 48

Bottom Row (14 boxes):

- Box 1: 35
- Box 2: 21
- Box 3: 1
- Box 4: 33
- Box 5: 21
- Box 6: 30
- Box 7: 50
- Box 8: 55
- Box 9: 77
- Box 10: 72
- Box 11: 33
- Box 12: 18
- Box 13: 1

$4 \times 12 = \boxed{\phantom{00}} \rightarrow \boxed{\text{T}}$

$7 \times 6 = \square \rightarrow \boxed{1}$

$7 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{\text{U}}$

$12 \times 10 = \boxed{\phantom{000}} \rightarrow \boxed{\mathbf{D}}$

$5 \times 11 = \boxed{\phantom{00}} \rightarrow \boxed{\text{C}}$

$1 \times 8 = \boxed{\phantom{00}} \rightarrow \boxed{\text{L}}$

$10 \times 5 = \boxed{\phantom{00}} \rightarrow \boxed{0}$

$5 \times 12 = \boxed{\phantom{000}} \rightarrow \boxed{\mathbf{G}}$

$7 \times 10 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{B}}$

$4 \times 6 = \square \rightarrow \boxed{\mathbf{N}}$

$5 \times 6 = \square \rightarrow \boxed{\text{H}}$

$1 \times 1 = \square \rightarrow \boxed{\mathbf{E}}$

$$2 \times 9 = \boxed{\phantom{00}} \rightarrow \boxed{\mathbf{V}}$$

$9 \times 8 =$    $\rightarrow$  **W**

$11 \times 7 = \boxed{\phantom{00}} \rightarrow \boxed{\text{K}}$

$11 \times 3 =$    $\rightarrow$  **A**

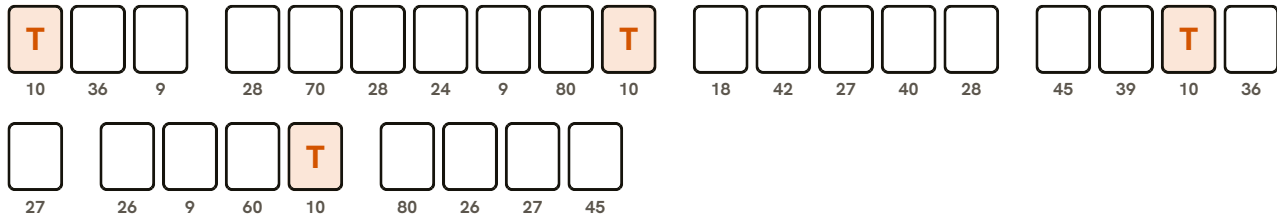
$7 \times 3 = \square \rightarrow \boxed{\text{S}}$

Scratch space:

## CLUE 2 Skip counting

The scrap yard elevator only moves when we count the teeth on these spinning gears.

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



Skip-count by 2s. Fill the blank: 2, 4, 6, 8, \_\_, 12, 14  → **T**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, \_\_, 28, 30  → **L**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, \_\_, 30, 32  → **S**

Skip-count by 3s. Fill the blank: 3, 6, \_\_, 12, 15  → **E**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, \_\_, 70, 80  → **F**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, \_\_, 39, 42  → **H**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, \_\_, 27, 30  → **P**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, \_\_, 21, 24  → **G**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, \_\_, 90, 100  → **C**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, \_\_, 30, 33  → **A**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, \_\_, 50, 55  → **W**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, \_\_, 42, 45  → **I**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, \_\_, 80, 90  → **U**

Skip-count by 10s. Fill the blank: 10, 20, 30, \_\_, 50, 60  → **B**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, \_\_, 45, 48  → **R**

Scratch space:

## CLUE 3

## Word problems

We found a box of spare batteries. Let us calculate how many the helper bots used today.

Solve each problem, then write its letter in the boxes to fill in the missing word.

Someone scared the villain off with D          E  .

37    56    74    12    33    56    30    30    76    74

Mechanic bot found 10 energy cells yesterday and 27 more today. How many energy cells in all?

Answer:  → D

Mechanic bot found 56 copper bolts yesterday and 20 more today. How many copper bolts in all?

Answer:  → I

There were 36 microchips. 3 were used up. How many microchips are left?

Answer:  → B

Mechanic bot found 8 energy cells yesterday and 4 more today. How many energy cells in all?

Answer:  → T

There were 90 energy cells. 16 were used up. How many energy cells are left?

Answer:  → S

There were 89 rusty springs. 33 were used up. How many rusty springs are left?

Answer:  → U

Mechanic bot lined up 10 rows of 3 energy cells. How many energy cells in all?

Answer:  → N

Scratch space:

## CLUE 4 Rounding

The power grid radar only displays total energy levels rounded to the nearest ten.

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

|          |      |      |      |      |    |     |    |      |    |          |    |    |     |    |    |
|----------|------|------|------|------|----|-----|----|------|----|----------|----|----|-----|----|----|
| <b>W</b> |      |      |      |      |    |     |    |      |    | <b>W</b> |    |    |     |    |    |
| 80       | 60   | 6000 | 3000 | 400  | 90 | 500 | 40 | 8000 | 70 | 400      | 60 | 80 | 600 | 20 | 60 |
|          |      |      |      |      |    |     |    |      |    |          |    |    |     |    |    |
| 9000     | 7000 | 60   | 700  | 3000 | 20 | 60  |    |      |    |          |    |    |     |    |    |

Round 77 to the nearest ten  → **W**

Round 39 to the nearest ten  → **A**

Round 464 to the nearest hundred  → **D**

Round 68 to the nearest ten  → **L**

Round 7,303 to the nearest thousand  → **H**

Round 598 to the nearest hundred  → **I**

Round 6,480 to the nearest thousand  → **F**

Round 8,394 to the nearest thousand  → **B**

Round 56 to the nearest ten  → **E**

Round 731 to the nearest hundred  → **C**

Round 19 to the nearest ten  → **R**

Round 2,624 to the nearest thousand  → **O**

Round 92 to the nearest ten  → **N**

Round 9,341 to the nearest thousand  → **T**

Round 393 to the nearest hundred  → **U**

Scratch space:

**CLUE 5****Missing addends - the last clue**

Some power cells are missing from the rack. Help the dock worker find the missing amount.

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:**

$5 + \underline{\quad} = 14$

$8 + \underline{\quad} = 9$

$2 + \underline{\quad} = 12$

$2 + \underline{\quad} = 10$

$1 + \underline{\quad} = 13$

$6 + \underline{\quad} = 11$

$6 + \underline{\quad} = 17$

$1 + \underline{\quad} = 5$

$5 + \underline{\quad} = 7$

$4 + \underline{\quad} = 10$

$3 + \underline{\quad} = 6$

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

1. The villain fires the rocket booster to breach the ceiling, then sprays an oil slicker to slide away.
2. The villain uses the laser welder to cut the safe, then sprays an oil slicker to slide away.
3. The villain uses the laser welder to cut the safe, then unfolds a solar panel to recharge its core.
4. The villain uses the laser welder to cut the safe, then deploys a bubble shield to block the alarms.
5. The villain blasts a plasma torch at the lock, then deploys a bubble shield to block the alarms.
6. The villain fires the rocket booster to breach the ceiling, then deploys a bubble shield to block the alarms.
7. The villain fires the rocket booster to breach the ceiling, then launches a decoy drone to confuse the sensors.
8. The villain uses the laser welder to cut the safe, then releases a shock wave to stun the guards.
9. The villain revs the sonic drill to break the floor, then deploys a bubble shield to block the alarms.
10. The villain activates the magnet arm to lift the vault door, then launches a decoy drone to confuse the sensors.
11. The villain activates the magnet arm to lift the vault door, then unfolds a solar panel to recharge its core.
12. The villain activates the magnet arm to lift the vault door, then releases a shock wave to stun the guards.

# Answer Key

## The Circuit City Caper

### Culprit: Data

rocket booster · decoy drone · Left clawed grip · blue wire · dust bunnies

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

### Clue 1 (Multiplication facts (1-12)): "THE GLITCH BOT DOES NOT USE A SHOCK WAVE"

$4 \times 12 = 48$  (T) ·  $7 \times 6 = 42$  (I) ·  $7 \times 5 = 35$  (U) ·  $12 \times 10 = 120$  (D) ·  $5 \times 11 = 55$  (C) ·  $1 \times 8 = 8$  (L) ·  $10 \times 5 = 50$  (O) ·  $5 \times 12 = 60$  (G) ·  $7 \times 10 = 70$  (B) ·  $4 \times 6 = 24$  (N) ·  $5 \times 6 = 30$  (H) ·  $1 \times 1 = 1$  (E) ·  $2 \times 9 = 18$  (V) ·  $9 \times 8 = 72$  (W) ·  $11 \times 7 = 77$  (K) ·  $11 \times 3 = 33$  (A) ·  $7 \times 3 = 21$  (S)

### Clue 2 (Skip counting): "THE SUSPECT GRABS WITH A LEFT CLAW"

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, \_\_, 12, 14 = 10 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, \_\_, 28, 30 = 26 (L) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, \_\_, 30, 32 = 28 (S) · Skip-count by 3s. Fill the blank: 3, 6, \_\_, 12, 15 = 9 (E) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, \_\_, 70, 80 = 60 (F) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, \_\_, 39, 42 = 36 (H) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, \_\_, 27, 30 = 24 (P) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, \_\_, 21, 24 = 18 (G) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, \_\_, 90, 100 = 80 (C) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, \_\_, 30, 33 = 27 (A) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, \_\_, 50, 55 = 45 (W) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, \_\_, 42, 45 = 39 (I) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, \_\_, 80, 90 = 70 (U) · Skip-count by 10s. Fill the blank: 10, 20, 30, \_\_, 50, 60 = 40 (B) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, \_\_, 45, 48 = 42 (R)

### Clue 3 (Word problems): "DUST BUNNIES"

Mechanic bot found 10 energy cells yesterday and 27 more today. How many energy cells in all? = 37 (D) · Mechanic bot found 56 copper bolts yesterday and 20 more today. How many copper bolts in all? = 76 (I) · There were 36 microchips. 3 were used up. How many microchips are left? = 33 (B) · Mechanic bot found 8 energy cells yesterday and 4 more today. How many energy cells in all? = 12 (T) · There were 90 energy cells. 16 were used up. How many energy cells are left? = 74 (S) · There were 89 rusty springs. 33 were used up. How many rusty springs are left? = 56 (U) · Mechanic bot lined up 10 rows of 3 energy cells. How many energy cells in all? = 30 (N)

### Clue 4 (Rounding): "WE FOUND A BLUE WIRE AT THE CORE"

Round 77 to the nearest ten = 80 (W) · Round 39 to the nearest ten = 40 (A) · Round 464 to the nearest hundred = 500 (D) · Round 68 to the nearest ten = 70 (L) · Round 7,303 to the nearest thousand = 7000 (H) · Round 598 to the nearest hundred = 600 (I) · Round 6,480 to the nearest thousand = 6000 (F) · Round 8,394 to the nearest thousand = 8000 (B) · Round 56 to the nearest ten = 60 (E) · Round 731 to the nearest hundred = 700 (C) · Round 19 to the nearest ten = 20 (R) · Round 2,624 to the nearest thousand = 3000 (O) · Round 92 to the nearest ten = 90 (N) · Round 9,341 to the nearest thousand = 9000 (T) · Round 393 to the nearest hundred = 400 (U)

### Clue 5 (Missing addends): surviving statement is box 7 → Data

$5 + \underline{\quad} = 14 = 9$  ·  $8 + \underline{\quad} = 9 = 1$  ·  $2 + \underline{\quad} = 12 = 10$  ·  $2 + \underline{\quad} = 10 = 8$  ·  $1 + \underline{\quad} = 13 = 12$  ·  $6 + \underline{\quad} = 11 = 5$  ·  $6 + \underline{\quad} = 17 = 11$  ·  $1 + \underline{\quad} = 5 = 4$  ·  $5 + \underline{\quad} = 7 = 2$  ·  $4 + \underline{\quad} = 10 = 6$  ·  $3 + \underline{\quad} = 6 = 3$