

The Robo-City Battery Heist

Grade 5 math · Place value, Multiplication, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ Date: _____

Alert! A sneaky Rogue Bot has broken into the high-security Robo-City Battery Vault. They stole the legendary Golden Microchip and zoomed away. We need you to look at the clues, solve the math, and find the culprit before the city runs out of power!

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

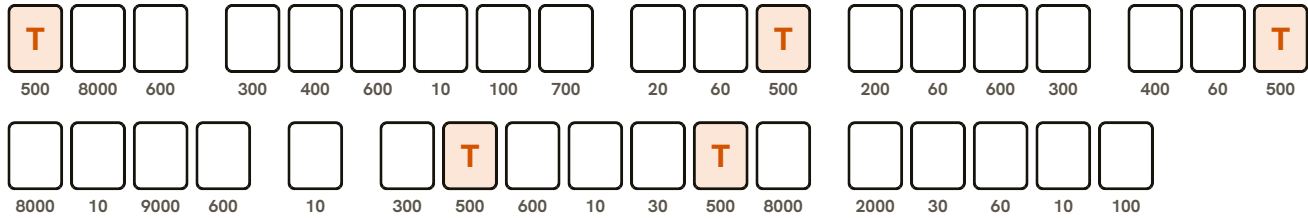
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY TOOL	SPECIAL UPGRADE	SENSOR LIGHT COLOR	HEAD WIRE TYPE	GLITCH TRIGGER
Cruiser	laser welder	jet pack	blue led light	silver cables	loud music
Bolt	laser welder	shield bubble	orange led light	fiber optics	loud music
Buster	plasma cutter	jet pack	blue led light	fiber optics	loud music
Sprocket	rocket booster	super sonar	blue led light	fiber optics	magnet walls
Widget	sonic drill	turbo speed	blue led light	fiber optics	magnet walls
Beep	magnet arm	shield bubble	blue led light	silver cables	loud music
Scrappy	laser welder	turbo speed	orange led light	copper coils	loud music
Blinker	plasma cutter	turbo speed	blue led light	copper coils	loud music
Gasket	sonic drill	super sonar	blue led light	silver cables	water puddles
Sparky	plasma cutter	turbo speed	orange led light	fiber optics	magnet walls
Volt	plasma cutter	jet pack	blue led light	copper coils	magnet walls
Zippy	plasma cutter	shield bubble	blue led light	fiber optics	water puddles
Piston	rocket booster	jet pack	blue led light	fiber optics	magnet walls
Rivets	rocket booster	jet pack	blue led light	copper coils	magnet walls
Clinker	magnet arm	stealth cloak	blue led light	copper coils	loud music
Radar	plasma cutter	jet pack	orange led light	fiber optics	magnet walls
Turbo	magnet arm	stealth cloak	blue led light	fiber optics	magnet walls
Gizmo	laser welder	super sonar	blue led light	copper coils	magnet walls
Gearbox	rocket booster	turbo speed	orange led light	copper coils	loud music
Rusty	sonic drill	jet pack	blue led light	fiber optics	loud music
Chassis	magnet arm	shield bubble	blue led light	fiber optics	magnet walls

CLUE 1 Place value

The security vault screen uses a secret number code. Let us look at the place value of each digit to unlock the first clue.

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



What is the value of the 5 in 738,566? → **T**

What is the value of the 6 in 112,672? → **E**

What is the value of the 7 in 961,793? → **Y**

What is the value of the 3 in 74,326? → **S**

What is the value of the 3 in 65,534? → **L**

What is the value of the 6 in 11,463? → **O**

What is the value of the 9 in 229,727? → **V**

What is the value of the 1 in 39,916? → **A**

What is the value of the 2 in 937,200? → **D**

What is the value of the 2 in 682,448? → **C**

What is the value of the 4 in 31,423? → **N**

What is the value of the 1 in 92,199? → **K**

What is the value of the 2 in 597,727? → **B**

What is the value of the 8 in 168,327? → **H**

Scratch space:

CLUE 2

Multiplication facts (1-12)

The bots keep spare power gears in neat rows on the shelf. If we multiply the rows, we can unlock the second clue.

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

A																	
77	30	22	10	80	22	11	32	121	36	32	22	96	55	80	27	11	33
				A				A									
36	121	80	27	77	6	9	5	77	10	22	36						

$11 \times 7 = \square \rightarrow \boxed{\text{A}}$

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

$8 \times 12 = \square \rightarrow \boxed{\text{O}}$

$2 \times 11 = \square \rightarrow \boxed{\text{L}}$

$11 \times 3 = \square \rightarrow \boxed{\text{N}}$

$5 \times 11 = \square \rightarrow \boxed{\text{W}}$

$1 \times 11 = \square \rightarrow \boxed{\text{I}}$

$1 \times 9 = \square \rightarrow \boxed{\text{K}}$

$2 \times 3 = \square \rightarrow \boxed{\text{R}}$

$5 \times 1 = \square \rightarrow \boxed{\text{V}}$

$11 \times 11 = \square \rightarrow \boxed{\text{H}}$

$10 \times 8 = \square \rightarrow \boxed{\text{E}}$

$4 \times 8 = \square \rightarrow \boxed{\text{G}}$

$4 \times 9 = \square \rightarrow \boxed{\text{T}}$

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

$5 \times 2 = \square \rightarrow \boxed{\text{U}}$

Scratch space:

CLUE 3

We found piles of dropped metal screws on the floor. Let us add them together to find the sum and unlock the third clue.

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

Diagram illustrating memory layout with two rows of blocks. The top row contains 16 blocks, and the bottom row contains 15 blocks. The addresses of the blocks are listed below them. The block at address 7438 in both rows is highlighted with an orange border and contains the letter 'T'.

Top Row:

T						T													
7438	8614	2943	5366	3503	5776	3503	7438	4181	8614	3766	5276	2943	5366	2943	9201	7328	2943	3834	5366

Bottom Row:

T							T						
7438	8614	2943	3898	3834	8067	7328	2943	7438	8906	3834	2341	2341	4181

$$4120 + 3318 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$5324 + 3290 = \boxed{} \rightarrow \boxed{\text{H}}$$

1591 + 3685 = →

$$2152 + 1351 = \boxed{} \rightarrow \boxed{0}$$

$$3663 + 1703 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$1963 + 1803 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$1793 + 1150 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$4470 + 2858 = \boxed{} \rightarrow \boxed{\text{N}}$$

$$3504 + 2272 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$4803 + 4103 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$1899 + 1935 = \boxed{} \rightarrow \boxed{\text{A}}$$

$$1751 + 2147 = \boxed{} \rightarrow \boxed{\text{M}}$$

$$1088 + 1253 = \boxed{} \rightarrow \boxed{\text{L}}$$

$3499 + 4568 = \square \rightarrow \text{G}$

$$2565 + 1616 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$5754 + 3447 = \boxed{} \rightarrow \boxed{\text{D}}$$

Scratch space:

CLUE 4 Subtraction

The master battery has lost some of its total energy charge. Let us subtract the leftover charge to unlock the fourth clue.

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

G						G											
7480	1538	6662	6808	5176	5540	7480	6802	5176	2582	7495	7688	6662	3129	6927	5176	3389	6622

6808	7495	7688	7495	1538	7495	6802	6927	2582	7495	5874	5176	5540	6581

$$11058 - 3578 = \boxed{} \rightarrow \boxed{\text{G}}$$

$$8201 - 2327 = \boxed{} \rightarrow \boxed{\text{H}}$$

$$11608 - 4946 = \boxed{} \rightarrow \boxed{\text{O}}$$

$$7355 - 2179 = \boxed{} \rightarrow \boxed{\text{I}}$$

$$7837 - 149 = \boxed{} \rightarrow \boxed{\text{R}}$$

$$9359 - 2557 = \boxed{} \rightarrow \boxed{\text{F}}$$

$$7728 - 1147 = \boxed{} \rightarrow \boxed{\text{D}}$$

$$3829 - 700 = \boxed{} \rightarrow \boxed{\text{P}}$$

$$7968 - 4579 = \boxed{} \rightarrow \boxed{\text{C}}$$

$$8511 - 1016 = \boxed{} \rightarrow \boxed{\text{E}}$$

$$9930 - 3308 = \boxed{} \rightarrow \boxed{\text{S}}$$

$$5837 - 3255 = \boxed{} \rightarrow \boxed{\text{B}}$$

$$8448 - 1640 = \boxed{} \rightarrow \boxed{\text{W}}$$

$$9125 - 2198 = \boxed{} \rightarrow \boxed{\text{T}}$$

$$5296 - 3758 = \boxed{} \rightarrow \boxed{\text{L}}$$

$$10494 - 4954 = \boxed{} \rightarrow \boxed{\text{N}}$$

Scratch space:

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

We have to share the backup power packs equally among the rescue bots. Let us divide them up to unlock 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:

$15 \div 5 = \boxed{}$

$49 \div 7 = \boxed{}$

$72 \div 8 = \boxed{}$

$99 \div 9 = \boxed{}$

$9 \div 9 = \boxed{}$

$44 \div 11 = \boxed{}$

$55 \div 11 = \boxed{}$

$24 \div 12 = \boxed{}$

$30 \div 5 = \boxed{}$

$120 \div 12 = \boxed{}$

$16 \div 2 = \boxed{}$

Step 2 - cross out the sentence with each answer:

1. The villain sliced the heavy hinges with a plasma cutter, then flew away using a sleek jet pack.
2. The villain sliced the heavy hinges with a plasma cutter, then located the exit tunnel with super sonar.
3. The villain flew over the high security fence with a rocket booster, then flew away using a sleek jet pack.
4. The villain pulled the metal safe with a magnet arm, then faded from sight using a stealth cloak.
5. The villain pulled the metal safe with a magnet arm, then located the exit tunnel with super sonar.
6. The villain drilled through the concrete with a sonic drill, then flew away using a sleek jet pack.
7. The villain drilled through the concrete with a sonic drill, then dashed past the security guards with turbo speed.
8. The villain pulled the metal safe with a magnet arm, then dashed past the security guards with turbo speed.
9. The villain pulled the metal safe with a magnet arm, then blocked the laser traps with a shield bubble.
10. The villain melted the vault lock with a laser welder, then located the exit tunnel with super sonar.
11. The villain flew over the high security fence with a rocket booster, then dashed past the security guards with turbo speed.
12. The villain flew over the high security fence with a rocket booster, then located the exit tunnel with super sonar.

Answer Key

The Robo-City Battery Heist

Culprit: Sprocket

rocket booster · super sonar · blue led light · fiber optics · magnet walls

Trail: Start 21 → Clue 1 19 → Clue 2 14 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Place value): "THE SNEAKY BOT DOES NOT HAVE A STEALTH CLOAK"

What is the value of the 5 in 738,566? = 500 (T) · What is the value of the 6 in 112,672? = 600 (E) · What is the value of the 7 in 961,793? = 700 (Y) · What is the value of the 3 in 74,326? = 300 (S) · What is the value of the 3 in 65,534? = 30 (L) · What is the value of the 6 in 11,463? = 60 (O) · What is the value of the 9 in 229,727? = 9000 (V) · What is the value of the 1 in 39,916? = 10 (A) · What is the value of the 2 in 937,200? = 200 (D) · What is the value of the 2 in 682,448? = 2000 (C) · What is the value of the 4 in 31,423? = 400 (N) · What is the value of the 1 in 92,199? = 100 (K) · What is the value of the 2 in 597,727? = 20 (B) · What is the value of the 8 in 168,327? = 8000 (H)

Clue 2 (Multiplication facts (1-12)): "A BLUE LIGHT GLOWED IN THE DARK VAULT"

$11 \times 7 = 77$ (A) · $5 \times 6 = 30$ (B) · $8 \times 12 = 96$ (O) · $2 \times 11 = 22$ (L) · $11 \times 3 = 33$ (N) · $5 \times 11 = 55$ (W) · $1 \times 11 = 11$ (I) · $1 \times 9 = 9$ (K) · $2 \times 3 = 6$ (R) · $5 \times 1 = 5$ (V) · $11 \times 11 = 121$ (H) · $10 \times 8 = 80$ (E) · $4 \times 8 = 32$ (G) · $4 \times 9 = 36$ (T) · $3 \times 9 = 27$ (D) · $5 \times 2 = 10$ (U)

Clue 3 (Addition): "THE ROBOT SHIVERED NEAR THE MAGNET WALLS"

$4120 + 3318 = 7438$ (T) · $5324 + 3290 = 8614$ (H) · $1591 + 3685 = 5276$ (V) · $2152 + 1351 = 3503$ (O) · $3663 + 1703 = 5366$ (R) · $1963 + 1803 = 3766$ (I) · $1793 + 1150 = 2943$ (E) · $4470 + 2858 = 7328$ (N) · $3504 + 2272 = 5776$ (B) · $4803 + 4103 = 8906$ (W) · $1899 + 1935 = 3834$ (A) · $1751 + 2147 = 3898$ (M) · $1088 + 1253 = 2341$ (L) · $3499 + 4568 = 8067$ (G) · $2565 + 1616 = 4181$ (S) · $5754 + 3447 = 9201$ (D)

Clue 4 (Subtraction): "GLOWING FIBER OPTICS WERE LEFT BEHIND"

$11058 - 3578 = 7480$ (G) · $8201 - 2327 = 5874$ (H) · $11608 - 4946 = 6662$ (O) · $7355 - 2179 = 5176$ (I) · $7837 - 149 = 7688$ (R) · $9359 - 2557 = 6802$ (F) · $7728 - 1147 = 6581$ (D) · $3829 - 700 = 3129$ (P) · $7968 - 4579 = 3389$ (C) · $8511 - 1016 = 7495$ (E) · $9930 - 3308 = 6622$ (S) · $5837 - 3255 = 2582$ (B) · $8448 - 1640 = 6808$ (W) · $9125 - 2198 = 6927$ (T) · $5296 - 3758 = 1538$ (L) · $10494 - 4954 = 5540$ (N)

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

$15 \div 5 = 3$ · $49 \div 7 = 7$ · $72 \div 8 = 9$ · $99 \div 9 = 11$ · $9 \div 9 = 1$ · $44 \div 11 = 4$ · $55 \div 11 = 5$ · $24 \div 12 = 2$ · $30 \div 5 = 6$ · $120 \div 12 = 10$ · $16 \div 2 = 8$