The Case of the Mischievous Mechanic

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

Detective: _____ **Date:** _____

A sneaky robot snuck into the city lab and scrambled the blueprint vault! The Chief Inventor needs your help to decode the clues, track down the rogue robot, and save the workshop.

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

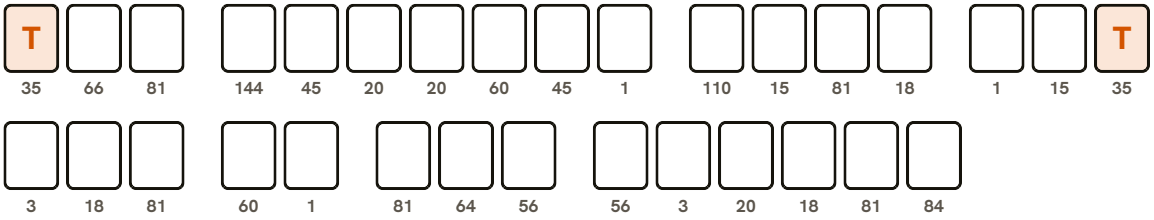
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY TOOL	SECONDARY GADGET	ANTENNA STYLE	HEAD WIRING	SYSTEM WEAKNESS
Flux	Laser Torch	Glider Wings	Right Antenna Bent	Blue Cables	Water Spray
Bolt	Sonic Blaster	Glider Wings	Left Antenna Bent	Silver Filaments	Water Spray
Widget	Plasma Shield	Grappling Hook	Right Antenna Bent	Copper Wires	Water Spray
Pixel	Sonic Blaster	Hacking Deck	Left Antenna Bent	Silver Filaments	Water Spray
Sprocket	Plasma Shield	Glider Wings	Right Antenna Bent	Blue Cables	Water Spray
Turing	Magnet Arm	Hacking Deck	Left Antenna Bent	Silver Filaments	Foam Cannon
Nano	Laser Torch	Glider Wings	Right Antenna Bent	Blue Cables	Magnet Trap
Edison	Plasma Shield	EMP Pulser	Right Antenna Bent	Blue Cables	Foam Cannon
Byte	Plasma Shield	EMP Pulser	Left Antenna Bent	Silver Filaments	Water Spray
Circuit	Plasma Shield	Smoke Launcher	Right Antenna Bent	Silver Filaments	Foam Cannon
Micro	Laser Torch	Grappling Hook	Right Antenna Bent	Copper Wires	Water Spray
Tesla	Rocket Boots	Smoke Launcher	Left Antenna Bent	Copper Wires	Water Spray
Volt	Rocket Boots	EMP Pulser	Right Antenna Bent	Blue Cables	Foam Cannon
Turbo	Laser Torch	Glider Wings	Left Antenna Bent	Silver Filaments	Foam Cannon
Spark	Magnet Arm	EMP Pulser	Left Antenna Bent	Silver Filaments	Foam Cannon
Cog	Magnet Arm	Grappling Hook	Left Antenna Bent	Silver Filaments	Water Spray
Lovelace	Sonic Blaster	Grappling Hook	Left Antenna Bent	Silver Filaments	Water Spray
Vector	Sonic Blaster	Grappling Hook	Left Antenna Bent	Blue Cables	Foam Cannon
Gizmo	Plasma Shield	Hacking Deck	Right Antenna Bent	Silver Filaments	Water Spray
Asimov	Laser Torch	Hacking Deck	Right Antenna Bent	Copper Wires	Water Spray
Radar	Plasma Shield	Glider Wings	Right Antenna Bent	Silver Filaments	Foam Cannon

CLUE 1 Multiplication facts (1-12)

> You find a tray of battery cells arranged in equal rows. Counting them up by groups gives you your first clue!

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



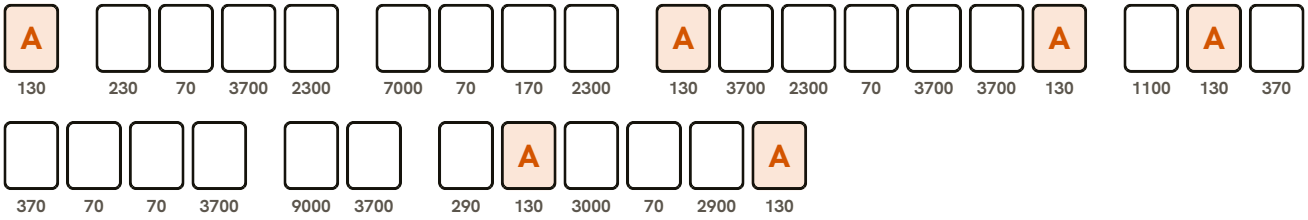
5 × 7 = ☐ → T	8 × 8 = ☐ → M	3 × 1 = ☐ → U	7 × 8 = ☐ → P
2 × 10 = ☐ → L	9 × 5 = ☐ → I	7 × 12 = ☐ → R	
12 × 12 = ☐ → V	1 × 1 = ☐ → N	6 × 3 = ☐ → S	
3 × 5 = ☐ → O	10 × 6 = ☐ → A	9 × 9 = ☐ → E	
6 × 11 = ☐ → H	10 × 11 = ☐ → D		

Scratch space:

CLUE 2 Rounding

The security console rounds all voltage readings to the nearest hundred. The display reveals a hidden hint!

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



Round 128 to the nearest ten ☐ → A

Round 368 to the nearest ten ☐ → S

Round 170 to the nearest ten ☐ → F

Round 8,716 to the nearest thousand ☐ → O

Round 3,046 to the nearest thousand ☐ → M

Round 3,711 to the nearest hundred ☐ → N

Round 233 to the nearest ten ☐ → B

Round 1,097 to the nearest hundred ☐ → W

Round 70 to the nearest ten ☐ → E

Round 2,908 to the nearest hundred ☐ → R

Round 2,292 to the nearest hundred ☐ → T

Round 287 to the nearest ten ☐ → C

Round 7,301 to the nearest thousand ☐ → L

Scratch space:

CLUE 3 Addition

By adding up all the spare gears found near the workbench, you piece together another clue.

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



2028 + 2632 = ☐ → T

1160 + 1890 = ☐ → R

1640 + 907 = ☐ → M

3105 + 3592 = ☐ → A

1404 + 943 = ☐ → H

4621 + 3133 = ☐ → L

4150 + 2673 = ☐ → V

1458 + 3227 = ☐ → P

1981 + 3266 = ☐ → N

2097 + 1695 = ☐ → O

1336 + 1941 = ☐ → F

1831 + 4248 = ☐ → W

4262 + 3262 = ☐ → Y

2124 + 2437 = ☐ → I

2537 + 1644 = ☐ → E

2920 + 4781 = ☐ → S

Scratch space:

CLUE 4 Subtraction

You calculate the energy remaining after subtracting used power units from the main battery grid.

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



6503 - 238 = ☐ → S

6448 - 2772 = ☐ → A

13310 - 4864 = ☐ → W

11165 - 3780 = ☐ → I

6022 - 4098 = ☐ → N

11217 - 3137 = ☐ → T

7160 - 4500 = ☐ → V

7370 - 3468 = ☐ → O

6616 - 2888 = ☐ → L

8449 - 4221 = ☐ → H

11473 - 3820 = ☐ → R

2781 - 1339 = ☐ → F

10162 - 3691 = ☐ → D

10282 - 1489 = ☐ → E

8079 - 1847 = ☐ → U

11097 - 4730 = ☐ → M

Scratch space:

CLUE 5 Missing addends - the last clue

The terminal needs a missing power total to unlock the file. Find the missing amount to get your 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:

22 + ___ = 32 ☐	12 + ___ = 19 ☐	11 + ___ = 17 ☐	18 + ___ = 23 ☐
33 + ___ = 36 ☐	31 + ___ = 40 ☐	27 + ___ = 29 ☐	35 + ___ = 36 ☐
5 + ___ = 17 ☐	6 + ___ = 14 ☐	22 + ___ = 26 ☐	

Step 2 - cross out the sentence with each answer:

1. The villain swung the magnet arm, then triggered an emp pulser.
2. The villain fired the laser torch, then unfolded glider wings.
3. The villain activated rocket boots, then launched a smoke bomb.
4. The villain fired the laser torch, then launched a smoke bomb.
5. The villain fired the laser torch, then fired a grappling hook.
6. The villain blasted the sonic cannon, then fired a grappling hook.
7. The villain swung the magnet arm, then fired a grappling hook.
8. The villain blasted the sonic cannon, then launched a smoke bomb.
9. The villain swung the magnet arm, then launched a smoke bomb.
10. The villain blasted the sonic cannon, then unfolded glider wings.
11. The villain blasted the sonic cannon, then plugged in a hacking deck.
12. The villain activated rocket boots, then triggered an emp pulser.

TEACHER / PARENT

Answer Key

The Case of the Mischievous Mechanic

Culprit: Pixel

Sonic Blaster · Hacking Deck · Left Antenna Bent · Silver Filaments · Water Spray

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

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT USE AN EMP PULSER"

5 × 7 = 35 (T) · 8 × 8 = 64 (M) · 3 × 1 = 3 (U) · 7 × 8 = 56 (P) · 2 × 10 = 20 (L) · 9 × 5 = 45 (I) · 7 × 12 = 84 (R) · 12 × 12 = 144 (V) · 1 × 1 = 1 (N) · 6 × 3 = 18 (S) · 3 × 5 = 15 (O) · 10 × 6 = 60 (A) · 9 × 9 = 81 (E) · 6 × 11 = 66 (H) · 10 × 11 = 110 (D)

Clue 2 (Rounding): "A BENT LEFT ANTENNA WAS SEEN ON CAMERA"

Round 128 to the nearest ten = 130 (A) · Round 368 to the nearest ten = 370 (S) · Round 170 to the nearest ten = 170 (F) · Round 8,716 to the nearest thousand = 9000 (O) · Round 3,046 to the nearest thousand = 3000 (M) · Round 3,711 to the nearest hundred = 3700 (N) · Round 233 to the nearest ten = 230 (B) · Round 1,097 to the nearest hundred = 1100 (W) · Round 70 to the nearest ten = 70 (E) · Round 2,908 to the nearest hundred = 2900 (R) · Round 2,292 to the nearest hundred = 2300 (T) · Round 287 to the nearest ten = 290 (C) · Round 7,301 to the nearest thousand = 7000 (L)

Clue 3 (Addition): "THE VILLAIN FLEES FROM WATER SPRAY"

2028 + 2632 = 4660 (T) · 1160 + 1890 = 3050 (R) · 1640 + 907 = 2547 (M) · 3105 + 3592 = 6697 (A) · 1404 + 943 = 2347 (H) · 4621 + 3133 = 7754 (L) · 4150 + 2673 = 6823 (V) · 1458 + 3227 = 4685 (P) · 1981 + 3266 = 5247 (N) · 2097 + 1695 = 3792 (O) · 1336 + 1941 = 3277 (F) · 1831 + 4248 = 6079 (W) · 4262 + 3262 = 7524 (Y) · 2124 + 2437 = 4561 (I) · 2537 + 1644 = 4181 (E) · 2920 + 4781 = 7701 (S)

Clue 4 (Subtraction): "SILVER FILAMENTS WERE FOUND ON THE FLOOR"

6503 - 238 = 6265 (S) · 6448 - 2772 = 3676 (A) · 13310 - 4864 = 8446 (W) · 11165 - 3780 = 7385 (I) · 6022 - 4098 = 1924 (N) · 11217 - 3137 = 8080 (T) · 7160 - 4500 = 2660 (V) · 7370 - 3468 = 3902 (O) · 6616 - 2888 = 3728 (L) · 8449 - 4221 = 4228 (H) · 11473 - 3820 = 7653 (R) · 2781 - 1339 = 1442 (F) · 10162 - 3691 = 6471 (D) · 10282 - 1489 = 8793 (E) · 8079 - 1847 = 6232 (U) · 11097 - 4730 = 6367 (M)

Clue 5 (Missing addends): surviving statement is box 11 → Pixel

22 + ___ = 32 = 10 · 12 + ___ = 19 = 7 · 11 + ___ = 17 = 6 · 18 + ___ = 23 = 5 · 33 + ___ = 36 = 3 · 31 + ___ = 40 = 9 · 27 + ___ = 29 = 2 · 35 + ___ = 36 = 1 · 5 + ___ = 17 = 12 · 6 + ___ = 14 = 8 · 22 + ___ = 26 = 4