The Mischievous Metal Mystery

Grade 4 math · Rounding, Addition, Subtraction, Multiplication, Division · Reading level grades 1-2

Detective: _____ **Date:** _____

A rogue robot sneaked into the Robo-City Workshop and mixed up all the blueprint files. Chief Inventor Tink needs your help to decode the clues and find the sneaky bot.

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

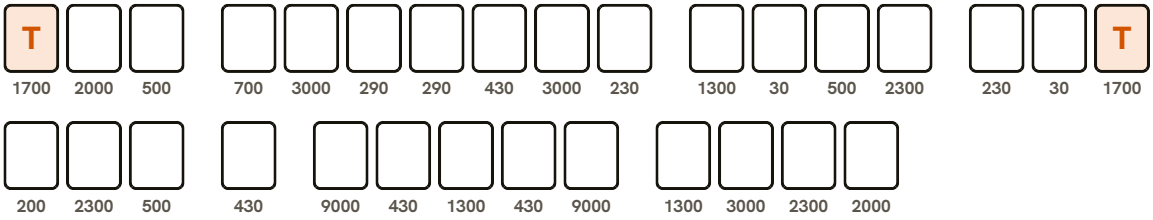
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	PRIMARY TOOL	GADGET	WIGGLING ANTENNA	WIRE COLOR	SHUTDOWN TRICK
Byte	Sonic Screwdriver	Radar Dish	Left Antenna	Glow Green Wires	Soapy Water
Bolt	Magnet Beam	Tire Treads	Right Antenna	Neon Blue Wires	Soapy Water
Copper	Plasma Cutter	Grapple Hook	Left Antenna	Neon Blue Wires	Soapy Water
Nano	Magnet Beam	Solar Wings	Right Antenna	Neon Blue Wires	Magnet Trap
Axel	Laser Welder	Grapple Hook	Left Antenna	Glow Green Wires	Magnet Trap
Radar	Sonic Screwdriver	Grapple Hook	Right Antenna	Neon Blue Wires	Magnet Trap
Gearhead	Sonic Screwdriver	Tire Treads	Right Antenna	Glow Green Wires	Soapy Water
Matrix	Plasma Cutter	Grapple Hook	Left Antenna	Neon Blue Wires	Magnet Trap
Turbo	Sonic Screwdriver	Tire Treads	Right Antenna	Neon Blue Wires	Magnet Trap
Circuit	Magnet Beam	Radar Dish	Left Antenna	Glow Green Wires	Magnet Trap
Rustie	Sonic Screwdriver	Radar Dish	Right Antenna	Bright Yellow Wires	Soapy Water
Gears	Plasma Cutter	Radar Dish	Left Antenna	Glow Green Wires	Giant Sponge
Chip	Magnet Beam	Solar Wings	Right Antenna	Glow Green Wires	Soapy Water
Rivets	Magnet Beam	Grapple Hook	Left Antenna	Glow Green Wires	Soapy Water
Widget	Plasma Cutter	Solar Wings	Left Antenna	Neon Blue Wires	Soapy Water
Beep	Plasma Cutter	Solar Wings	Right Antenna	Neon Blue Wires	Soapy Water
Welder	Magnet Beam	Radar Dish	Right Antenna	Neon Blue Wires	Magnet Trap
Gizmo	Drill Arm	Solar Wings	Right Antenna	Neon Blue Wires	Giant Sponge
Sparky	Sonic Screwdriver	Solar Wings	Right Antenna	Bright Yellow Wires	Magnet Trap
Clinker	Drill Arm	Solar Wings	Right Antenna	Neon Blue Wires	Magnet Trap
Titan	Laser Welder	Hover Boots	Left Antenna	Glow Green Wires	Magnet Trap

CLUE 1 Rounding

The workshop scanner rounds the energy readings to the nearest hundred.

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



Round 1,737 to the nearest hundred ☐ → T

Round 2,366 to the nearest thousand ☐ → H

Round 9,350 to the nearest thousand ☐ → R

Round 292 to the nearest ten ☐ → L

Round 33 to the nearest ten ☐ → O

Round 428 to the nearest ten ☐ → A

Round 1,287 to the nearest hundred ☐ → D

Round 230 to the nearest ten ☐ → N

Round 734 to the nearest hundred ☐ → V

Round 2,726 to the nearest thousand ☐ → I

Round 540 to the nearest hundred ☐ → E

Round 189 to the nearest hundred ☐ → U

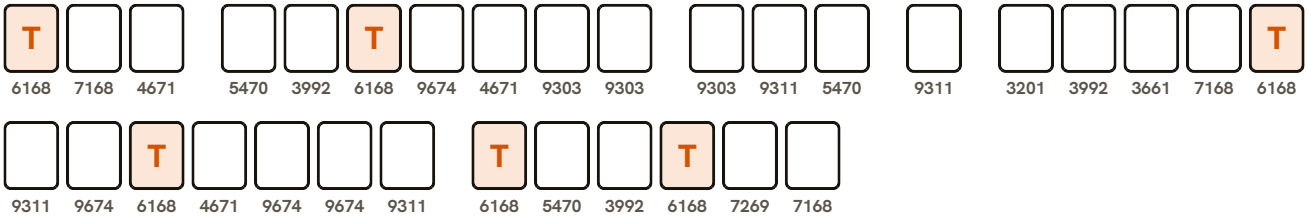
Round 2,257 to the nearest hundred ☐ → S

Scratch space:

CLUE 2 Addition

We gather all the loose spare parts on the floor to see what is missing.

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



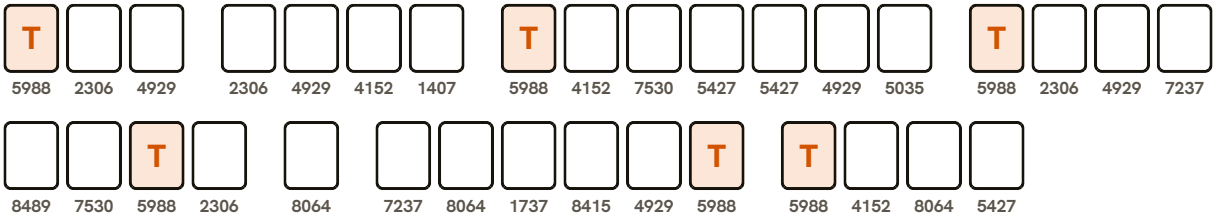
3934 + 2234 = ☐ → T	1202 + 2459 = ☐ → G	3168 + 6135 = ☐ → S
1819 + 1382 = ☐ → R	2817 + 6494 = ☐ → A	2305 + 2366 = ☐ → E
1642 + 2350 = ☐ → I	4163 + 3106 = ☐ → C	4238 + 5436 = ☐ → N
3182 + 3986 = ☐ → H	2944 + 2526 = ☐ → W	

Scratch space:

CLUE 3 Subtraction

We count the remaining batteries after the sneaky robot took some.

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



7971 - 1983 = ☐ → T

10568 - 3331 = ☐ → M

8408 - 4256 = ☐ → R

2238 - 501 = ☐ → G

6467 - 1040 = ☐ → P

8704 - 3775 = ☐ → E

8332 - 3297 = ☐ → D

4235 - 2828 = ☐ → O

9363 - 874 = ☐ → W

10647 - 2583 = ☐ → A

10906 - 3376 = ☐ → I

2702 - 396 = ☐ → H

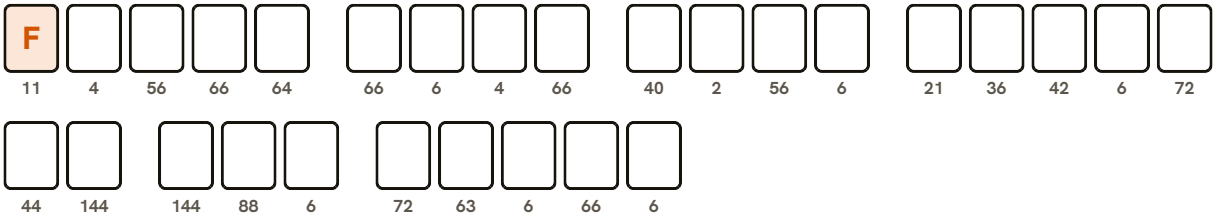
9698 - 1283 = ☐ → N

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The repair bay has rows of toolboxes packed with equal sets of screws.

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



1 × 11 = ☐ → F	9 × 8 = ☐ → S	7 × 8 = ☐ → U	9 × 4 = ☐ → I
6 × 7 = ☐ → R	1 × 2 = ☐ → L	11 × 6 = ☐ → N	9 × 7 = ☐ → C
12 × 12 = ☐ → T	4 × 1 = ☐ → O	6 × 1 = ☐ → E	
3 × 7 = ☐ → W	8 × 5 = ☐ → B	8 × 8 = ☐ → D	11 × 8 = ☐ → H
4 × 11 = ☐ → A			

Scratch space:

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

> We share the shiny gears evenly among the helper bots to fix the door.

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:

42 ÷ 6 = ☐	54 ÷ 6 = ☐	12 ÷ 1 = ☐	6 ÷ 1 = ☐	88 ÷ 8 = ☐
10 ÷ 1 = ☐	12 ÷ 3 = ☐	8 ÷ 1 = ☐	5 ÷ 1 = ☐	18 ÷ 9 = ☐
3 ÷ 1 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain spun a drill arm, then glided on solar wings.
2. The villain cut with a plasma cutter, then glided on solar wings.
3. The villain cut with a plasma cutter, then floated in hover boots.
4. The villain cut with a plasma cutter, then rolled on tire treads.
5. The villain spun a drill arm, then scanned with a radar dish.
6. The villain cut with a plasma cutter, then swung on a grapple hook.
7. The villain waved a sonic screwdriver, then swung on a grapple hook.
8. The villain pulled with a magnet beam, then scanned with a radar dish.
9. The villain pulled with a magnet beam, then glided on solar wings.
10. The villain used a laser welder, then floated in hover boots.
11. The villain pulled with a magnet beam, then rolled on tire treads.
12. The villain waved a sonic screwdriver, then rolled on tire treads.

TEACHER / PARENT

Answer Key

The Mischievous Metal Mystery

Culprit: Clinker

Drill Arm · Solar Wings · Right Antenna · Neon Blue Wires · Magnet Trap

Trail: Start 21 → Clue 1 16 → Clue 2 10 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN DOES NOT USE A RADAR DISH"

Round 1,737 to the nearest hundred = 1700 (T) · Round 2,366 to the nearest thousand = 2000 (H) · Round 9,350 to the nearest thousand = 9000 (R) · Round 292 to the nearest ten = 290 (L) · Round 33 to the nearest ten = 30 (O) · Round 428 to the nearest ten = 430 (A) · Round 1,287 to the nearest hundred = 1300 (D) · Round 230 to the nearest ten = 230 (N) · Round 734 to the nearest hundred = 700 (V) · Round 2,726 to the nearest thousand = 3000 (I) · Round 540 to the nearest hundred = 500 (E) · Round 189 to the nearest hundred = 200 (U) · Round 2,257 to the nearest hundred = 2300 (S)

Clue 2 (Addition): "THE WITNESS SAW A RIGHT ANTENNA TWITCH"

3934 + 2234 = 6168 (T) · 1202 + 2459 = 3661 (G) · 3168 + 6135 = 9303 (S) · 1819 + 1382 = 3201 (R) · 2817 + 6494 = 9311 (A) · 2305 + 2366 = 4671 (E) · 1642 + 2350 = 3992 (I) · 4163 + 3106 = 7269 (C) · 4238 + 5436 = 9674 (N) · 3182 + 3986 = 7168 (H) · 2944 + 2526 = 5470 (W)

Clue 3 (Subtraction): "THE HERO TRIPPED THEM WITH A MAGNET TRAP"

7971 - 1983 = 5988 (T) · 10568 - 3331 = 7237 (M) · 8408 - 4256 = 4152 (R) · 2238 - 501 = 1737 (G) · 6467 - 1040 = 5427 (P) · 8704 - 3775 = 4929 (E) · 8332 - 3297 = 5035 (D) · 4235 - 2828 = 1407 (O) · 9363 - 874 = 8489 (W) · 10647 - 2583 = 8064 (A) · 10906 - 3376 = 7530 (I) · 2702 - 396 = 2306 (H) · 9698 - 1283 = 8415 (N)

Clue 4 (Multiplication facts (1-12)): "FOUND NEON BLUE WIRES AT THE SCENE"

1 × 11 = 11 (F) · 9 × 8 = 72 (S) · 7 × 8 = 56 (U) · 9 × 4 = 36 (I) · 6 × 7 = 42 (R) · 1 × 2 = 2 (L) · 11 × 6 = 66 (N) · 9 × 7 = 63 (C) · 12 × 12 = 144 (T) · 4 × 1 = 4 (O) · 6 × 1 = 6 (E) · 3 × 7 = 21 (W) · 8 × 5 = 40 (B) · 8 × 8 = 64 (D) · 11 × 8 = 88 (H) · 4 × 11 = 44 (A)

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

42 ÷ 6 = 7 · 54 ÷ 6 = 9 · 12 ÷ 1 = 12 · 6 ÷ 1 = 6 · 88 ÷ 8 = 11 · 10 ÷ 1 = 10 · 12 ÷ 3 = 4 · 8 ÷ 1 = 8 · 5 ÷ 1 = 5 · 18 ÷ 9 = 2 · 3 ÷ 1 = 3