The Great Spark Core Heist

Grade 9 math · Rounding, Addition, Subtraction, Multiplication, Division · Reading level grades 7-9

Detective: _____ **Date:** _____

A high-security Spark Core has been stolen from the central laboratory. A rogue automaton bypassed the biometric security grid, leaving behind scorched circuits and scrambled log files. Detective, you must analyze the corrupted data to identify which robot is responsible before they drain the core's 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 automaton 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 SUBSYSTEM	OPTICAL LASER COLOR	CHASSIS CABLING	SYSTEM VULNERABILITY
Unit Galileo	Hydraulic Press	Shield Generator	Bright Amber Laser	Shielded Gold Wires	Saline Splash
Unit Clarke	Laser Welder	Jet Thrusters	Neon Green Laser	Shielded Gold Wires	Static Discharge
Unit Gibson	Hydraulic Press	Sonar Array	Neon Green Laser	Insulated Silver Wires	Static Discharge
Unit Kepler	Laser Welder	Jet Thrusters	Neon Green Laser	Braided Copper Wires	Static Discharge
Unit Bradbury	Hydraulic Press	Jet Thrusters	Bright Amber Laser	Braided Copper Wires	Saline Splash
Unit Dick	Pneumatic Claw	Thermal Camera	Bright Amber Laser	Braided Copper Wires	Saline Splash
Unit Copernicus	Plasma Cutter	Shield Generator	Neon Green Laser	Braided Copper Wires	Neodymium Magnet
Unit Tesla	Hydraulic Press	Thermal Camera	Bright Amber Laser	Insulated Silver Wires	Static Discharge
Unit Babbage	Hydraulic Press	Shield Generator	Bright Amber Laser	Shielded Gold Wires	Static Discharge
Unit Lem	Hydraulic Press	Thermal Camera	Bright Amber Laser	Braided Copper Wires	Saline Splash
Unit Newton	Plasma Cutter	Thermal Camera	Neon Green Laser	Insulated Silver Wires	Saline Splash
Unit Asimov	Pneumatic Claw	Jet Thrusters	Neon Green Laser	Shielded Gold Wires	Static Discharge
Unit Pascal	Plasma Cutter	Thermal Camera	Neon Green Laser	Braided Copper Wires	Saline Splash
Unit Turing	Magnetic Gripper	Shield Generator	Neon Green Laser	Braided Copper Wires	Saline Splash
Unit Curie	Plasma Cutter	Shield Generator	Bright Amber Laser	Shielded Gold Wires	Static Discharge
Unit Orwell	Magnetic Gripper	Cloaking Field	Neon Green Laser	Insulated Silver Wires	Static Discharge
Unit Lovelace	Laser Welder	Cloaking Field	Neon Green Laser	Shielded Gold Wires	Static Discharge
Unit Hopper	Hydraulic Press	Cloaking Field	Bright Amber Laser	Braided Copper Wires	Saline Splash
Unit Hubble	Hydraulic Press	Shield Generator	Bright Amber Laser	Braided Copper Wires	Static Discharge
Unit Shelley	Pneumatic Claw	Jet Thrusters	Bright Amber Laser	Shielded Gold Wires	Saline Splash
Unit Hawking	Pneumatic Claw	Sonar Array	Bright Amber Laser	Braided Copper Wires	Saline Splash

CLUE 1 Rounding

> We found a bootleg diagnostic terminal, but its low-resolution screen rounds the current voltage to the nearest hundred.

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

T																				
30000	310000	700		310	140000	50000	50000	20	140000	4700		310000	20	3000		4700	470			
2800000	50000	470	20	500	140000	4700	280000		50	140000	700	50000	1400							

Round 29,305 to the nearest ten thousand ☐ → T

Round 281,700 to the nearest ten thousand ☐ → G

Round 467 to the nearest ten ☐ → O

Round 2,832,203 to the nearest hundred thousand ☐ → C

Round 51,354 to the nearest ten thousand ☐ → L

Round 4,692 to the nearest hundred ☐ → N

Round 142,732 to the nearest ten thousand ☐ → I

Round 306 to the nearest ten ☐ → V

Round 24 to the nearest ten ☐ → A

Round 543 to the nearest hundred ☐ → K

Round 307,635 to the nearest ten thousand ☐ → H

Round 2,912 to the nearest thousand ☐ → S

Round 693 to the nearest hundred ☐ → E

Round 50 to the nearest ten ☐ → F

Round 1,387 to the nearest hundred ☐ → D

Scratch space:

CLUE 2 Addition

> Tallying the total energy spikes across the power grid lets us calculate the unit weight of the rogue bot.

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

3005 + 2180 = ☐ → A	3327 + 3132 = ☐ → T	3279 + 1703 = ☐ → D
3099 + 4922 = ☐ → R	2195 + 2547 = ☐ → H	1837 + 1631 = ☐ → C
2635 + 1248 = ☐ → B	4327 + 4440 = ☐ → L	2010 + 2834 = ☐ → M
832 + 1436 = ☐ → G	3565 + 5029 = ☐ → I	2028 + 1299 = ☐ → E

Scratch space:

CLUE 3 Subtraction

> Subtracting the leftover oil reserves from the tank's original capacity reveals the exact fuel efficiency of the thief.

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

6417 - 2119 = ☐ → S

8731 - 2322 = ☐ → P

10341 - 1890 = ☐ → H

2197 - 895 = ☐ → T

4989 - 2790 = ☐ → L

12446 - 3572 = ☐ → A

11407 - 3637 = ☐ → C

4244 - 727 = ☐ → U

8204 - 1522 = ☐ → O

8786 - 3197 = ☐ → R

4477 - 582 = ☐ → I

8126 - 1651 = ☐ → E

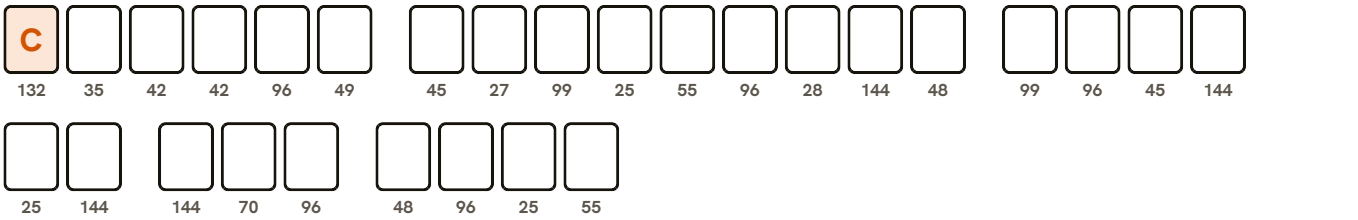
9844 - 4545 = ☐ → W

Scratch space:

CLUE 4 Multiplication facts (1-12)

> The server room is arranged in a massive grid, and multiplying the row count by the active servers pinpoints the suspect's frequency.

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



- 12 × 11 = ☐ → C
- 5 × 5 = ☐ → A
- 7 × 6 = ☐ → P
- 7 × 10 = ☐ → H
- 7 × 5 = ☐ → O
- 3 × 9 = ☐ → I
- 5 × 9 = ☐ → F
- 5 × 11 = ☐ → M
- 12 × 12 = ☐ → T
- 6 × 8 = ☐ → S
- 4 × 7 = ☐ → N
- 12 × 8 = ☐ → E
- 11 × 9 = ☐ → L
- 7 × 7 = ☐ → R

Scratch space:

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

> By dividing the stolen memory drive's sectors equally among our decryption nodes, we isolate the final security code.

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:

60 ÷ 6 = ☐ | 144 ÷ 12 = ☐ | 30 ÷ 6 = ☐ | 7 ÷ 1 = ☐ | 99 ÷ 11 = ☐

33 ÷ 3 = ☐ | 4 ÷ 1 = ☐ | 80 ÷ 10 = ☐ | 20 ÷ 10 = ☐ | 66 ÷ 11 = ☐

5 ÷ 5 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain sliced open the vault door with a laser welder, then blasted through the roof vents with jet thrusters.
2. The villain melted the lock using a plasma cutter, then pinged the getaway route using a sonar array.
3. The villain ripped the console apart with a pneumatic claw, then pinged the getaway route using a sonar array.
4. The villain wrenched the safe free using a magnetic gripper, then faded into the shadows using a cloaking field.
5. The villain crushed the steel gate with a hydraulic press, then located the guard patrols with a thermal camera.
6. The villain crushed the steel gate with a hydraulic press, then blocked incoming security bolts with a shield generator.
7. The villain ripped the console apart with a pneumatic claw, then blocked incoming security bolts with a shield generator.
8. The villain sliced open the vault door with a laser welder, then located the guard patrols with a thermal camera.
9. The villain sliced open the vault door with a laser welder, then faded into the shadows using a cloaking field.
10. The villain crushed the steel gate with a hydraulic press, then blasted through the roof vents with jet thrusters.
11. The villain crushed the steel gate with a hydraulic press, then pinged the getaway route using a sonar array.
12. The villain ripped the console apart with a pneumatic claw, then located the guard patrols with a thermal camera.

TEACHER / PARENT

Answer Key

The Great Spark Core Heist

Culprit: Unit Hawking

Pneumatic Claw · Sonar Array · Bright Amber Laser · Braided Copper Wires · Saline Splash

Trail: Start 21 → Clue 1 18 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Rounding): "THE VILLAIN HAS NO CLOAKING FIELD"

Round 29,305 to the nearest ten thousand = 30000 (T) · Round 281,700 to the nearest ten thousand = 280000 (G) · Round 467 to the nearest ten = 470 (O) · Round 2,832,203 to the nearest hundred thousand = 2800000 (C) · Round 51,354 to the nearest ten thousand = 50000 (L) · Round 4,692 to the nearest hundred = 4700 (N) · Round 142,732 to the nearest ten thousand = 140000 (I) · Round 306 to the nearest ten = 310 (V) · Round 24 to the nearest ten = 20 (A) · Round 543 to the nearest hundred = 500 (K) · Round 307,635 to the nearest ten thousand = 310000 (H) · Round 2,912 to the nearest thousand = 3000 (S) · Round 693 to the nearest hundred = 700 (E) · Round 50 to the nearest ten = 50 (F) · Round 1,387 to the nearest hundred = 1400 (D)

Clue 2 (Addition): "AMBER LIGHT BEAMED AT THE CAMERA"

3005 + 2180 = 5185 (A) · 3327 + 3132 = 6459 (T) · 3279 + 1703 = 4982 (D) · 3099 + 4922 = 8021 (R) · 2195 + 2547 = 4742 (H) · 1837 + 1631 = 3468 (C) · 2635 + 1248 = 3883 (B) · 4327 + 4440 = 8767 (L) · 2010 + 2834 = 4844 (M) · 832 + 1436 = 2268 (G) · 3565 + 5029 = 8594 (I) · 2028 + 1299 = 3327 (E)

Clue 3 (Subtraction): "SALT WATER WIPES OUT THE CIRCUITS"

6417 - 2119 = 4298 (S) · 8731 - 2322 = 6409 (P) · 10341 - 1890 = 8451 (H) · 2197 - 895 = 1302 (T) · 4989 - 2790 = 2199 (L) · 12446 - 3572 = 8874 (A) · 11407 - 3637 = 7770 (C) · 4244 - 727 = 3517 (U) · 8204 - 1522 = 6682 (O) · 8786 - 3197 = 5589 (R) · 4477 - 582 = 3895 (I) · 8126 - 1651 = 6475 (E) · 9844 - 4545 = 5299 (W)

Clue 4 (Multiplication facts (1-12)): "COPPER FILAMENTS LEFT AT THE SEAM"

12 × 11 = 132 (C) · 5 × 5 = 25 (A) · 7 × 6 = 42 (P) · 7 × 10 = 70 (H) · 7 × 5 = 35 (O) · 3 × 9 = 27 (I) · 5 × 9 = 45 (F) · 5 × 11 = 55 (M) · 12 × 12 = 144 (T) · 6 × 8 = 48 (S) · 4 × 7 = 28 (N) · 12 × 8 = 96 (E) · 11 × 9 = 99 (L) · 7 × 7 = 49 (R)

Clue 5 (Division facts (1-12)): surviving statement is box 3 → Unit Hawking

60 ÷ 6 = 10 · 144 ÷ 12 = 12 · 30 ÷ 6 = 5 · 7 ÷ 1 = 7 · 99 ÷ 11 = 9 · 33 ÷ 3 = 11 · 4 ÷ 1 = 4 · 80 ÷ 10 = 8 · 20 ÷ 10 = 2 · 66 ÷ 11 = 6 · 5 ÷ 5 = 1