



The Great Spark City Bot Hunt

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

Detective: _____ Date: _____

A rogue robot has escaped from the Spark City Lab! It took the Golden Microchip. We need you to decode the clues and find the rogue bot before its battery drains. Tech-Kid Cody is ready to help you track it 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 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	BACKUP GEAR	SPARK SIDE	LOOSE WIRE	SYSTEM VULNERABILITY
Data	Sonic Horn	Night Vision	Left Side Spark	Green Wire	Magnet
Eve	Plasma Cutter	Magnetic Soles	Left Side Spark	Green Wire	Rust Spray
Gort	Laser Welder	Smoke Screen	Left Side Spark	Green Wire	Water
Robby	Claw Grabber	Turbo Thrusters	Right Side Spark	Green Wire	Water
Bolts	Claw Grabber	Magnetic Soles	Left Side Spark	Green Wire	Water
Rusty	Claw Grabber	Night Vision	Left Side Spark	Blue Wire	Water
Gizmo	Claw Grabber	Magnetic Soles	Right Side Spark	Blue Wire	Rust Spray
Optimus	Sonic Horn	Bubble Shield	Right Side Spark	Green Wire	Rust Spray
Megatron	Laser Welder	Bubble Shield	Left Side Spark	Green Wire	Magnet
Sparky	Sonic Horn	Smoke Screen	Left Side Spark	Green Wire	Rust Spray
Bender	Sonic Horn	Magnetic Soles	Left Side Spark	Red Wire	Rust Spray
Pip	Claw Grabber	Smoke Screen	Left Side Spark	Red Wire	Water
Alita	Laser Welder	Turbo Thrusters	Left Side Spark	Red Wire	Magnet
Baymax	Claw Grabber	Night Vision	Left Side Spark	Green Wire	Magnet
Walle	Super Drill	Night Vision	Right Side Spark	Blue Wire	Rust Spray
Rosie	Plasma Cutter	Magnetic Soles	Left Side Spark	Green Wire	Magnet
Hal	Laser Welder	Smoke Screen	Left Side Spark	Green Wire	Magnet
Astro	Claw Grabber	Smoke Screen	Right Side Spark	Green Wire	Magnet
Rodney	Claw Grabber	Magnetic Soles	Left Side Spark	Blue Wire	Water
Gipsy	Sonic Horn	Bubble Shield	Right Side Spark	Blue Wire	Water
Clank	Laser Welder	Night Vision	Right Side Spark	Blue Wire	Magnet

CLUE 1 Addition

Cody needs to add up the spare gears found on two workbenches. Combining them will unlock the first encryption lock.

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

T					T												
8977	6474	2987	6972	7830	8977	8727	7830	2987	3927	6996	7830	8977	6474	8555	6402	2987	8555

6972	4723	6972	6972	6254	2987	3927	6474	4524	2987	6254	8727

5089 + 3888 = → T	3754 + 4973 = → D	1238 + 1749 = → E
2852 + 3550 = → V	1653 + 2274 = → S	4092 + 3738 = → O
4010 + 2986 = → N	2745 + 3729 = → H	1573 + 3150 = → U
2129 + 4125 = → L	4572 + 3983 = → A	4725 + 2247 = → B
2669 + 1855 = → I		

Scratch space:

CLUE 2

Subtraction

To find how much fuel the rogue robot used, Cody subtracts the remaining energy from the starting full tank.

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

T																			
1053	7597	4910	8792	7923	4148	4148	5954	7923	2434	5769	3929	5954	2810	3066	5769	2671	2810	7462	5776

T						T
1053	7597	4910	4148	4910	2671	1053

$1295 - 242 = \square \rightarrow \boxed{\text{T}}$

$6078 - 1168 = \square \rightarrow \boxed{\text{E}}$

$7154 - 1385 = \square \rightarrow \boxed{\text{S}}$

$8116 - 2162 = \square \rightarrow \boxed{\text{A}}$

$8141 - 2365 = \square \rightarrow \boxed{\text{M}}$

$13056 - 4264 = \square \rightarrow \boxed{\text{V}}$

$4512 - 1841 = \square \rightarrow \boxed{\text{F}}$

$8064 - 467 = \square \rightarrow \boxed{\text{H}}$

$4247 - 1181 = \square \rightarrow \boxed{\text{K}}$

$7398 - 4588 = \square \rightarrow \boxed{\text{R}}$

$6793 - 2645 = \square \rightarrow \boxed{\text{L}}$

$10514 - 3052 = \square \rightarrow \boxed{\text{O}}$

$10864 - 2941 = \square \rightarrow \boxed{\text{I}}$

$3959 - 1525 = \square \rightarrow \boxed{\text{N}}$

$6742 - 2813 = \square \rightarrow \boxed{\text{P}}$

Scratch space:

CLUE 3 Place value

The lab safe uses a keypad. Cody must look at the digit in the hundreds place of the serial number to find the override code.

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

T					T		T									
60	50	9000	900	40	60	4000	60	40	100	4000	500	40	10		400	

					T
600	400	200	6000	9000	60

What is the value of the 6 in 5,868? → **T**

What is the value of the 9 in 9,878? → **E**

What is the value of the 2 in 3,208? → **G**

What is the value of the 5 in 503? → **F**

What is the value of the 6 in 6,805? → **N**

What is the value of the 4 in 9,497? → **A**

What is the value of the 1 in 914? → **R**

What is the value of the 1 in 122? → **P**

What is the value of the 4 in 9,949? → **O**

What is the value of the 5 in 453? → **H**

What is the value of the 9 in 953? → **B**

What is the value of the 4 in 54,609? → **S**

What is the value of the 6 in 5,683? → **M**

Scratch space:

CLUE 4

Rounding

The radar screen only shows rounded estimates of the bot's speed. Cody must round the signal number to the nearest ten to pinpoint the direction.

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

W											W					
430	7000	110	500	90	50	3000	1100	2900	3700	7000	7000	50	430	5000	3700	7000

Round 429 to the nearest ten → **W**

Round 5,399 to the nearest thousand → **I**

Round 54 to the nearest ten → **N**

Round 2,854 to the nearest hundred → **G**

Round 87 to the nearest ten → **U**

Round 3,027 to the nearest thousand → **D**

Round 3,685 to the nearest hundred → **R**

Round 111 to the nearest ten → **F**

Round 517 to the nearest hundred → **O**

Round 1,077 to the nearest hundred → **A**

Round 6,686 to the nearest thousand → **E**

Scratch space:

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

The battery charger needs exactly one hundred volts. Cody counts ninety-two volts and must find the missing amount to power up the decoder.

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:

$23 + \underline{\quad} = 31$

$5 + \underline{\quad} = 11$

$30 + \underline{\quad} = 35$

$4 + \underline{\quad} = 6$

$37 + \underline{\quad} = 47$

$21 + \underline{\quad} = 24$

$24 + \underline{\quad} = 28$

$35 + \underline{\quad} = 42$

$2 + \underline{\quad} = 13$

$34 + \underline{\quad} = 46$

$32 + \underline{\quad} = 33$

Step 2 - cross out the sentence with each answer:

1. The villain drilled a big tunnel, then zoomed out of the window.
2. The villain blasted a loud alarm, then bounced away in a bubble.
3. The villain snatched the gold chip, then walked up the metal wall.
4. The villain sliced through the wall, then left a thick grey cloud.
5. The villain sliced through the wall, then walked up the metal wall.
6. The villain snatched the gold chip, then raced through the dark.
7. The villain blasted a loud alarm, then walked up the metal wall.
8. The villain blasted a loud alarm, then raced through the dark.
9. The villain melted the vault gate, then left a thick grey cloud.
10. The villain melted the vault gate, then raced through the dark.
11. The villain drilled a big tunnel, then walked up the metal wall.
12. The villain sliced through the wall, then zoomed out of the window.

Answer Key

The Great Spark City Bot Hunt

Culprit: Hal

Laser Welder · Smoke Screen · Left Side Spark · Green Wire · Magnet

Trail: Start 21 → Clue 1 18 → Clue 2 13 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE BOT DOES NOT HAVE A BUBBLE SHIELD"

$5089 + 3888 = 8977$ (T) · $3754 + 4973 = 8727$ (D) · $1238 + 1749 = 2987$ (E) · $2852 + 3550 = 6402$ (V) · $1653 + 2274 = 3927$ (S) · $4092 + 3738 = 7830$ (O) · $4010 + 2986 = 6996$ (N) · $2745 + 3729 = 6474$ (H) · $1573 + 3150 = 4723$ (U) · $2129 + 4125 = 6254$ (L) · $4572 + 3983 = 8555$ (A) · $4725 + 2247 = 6972$ (B) · $2669 + 1855 = 4524$ (I)

Clue 2 (Subtraction): "THE VILLAIN SPARKS FROM THE LEFT"

$1295 - 242 = 1053$ (T) · $6078 - 1168 = 4910$ (E) · $7154 - 1385 = 5769$ (S) · $8116 - 2162 = 5954$ (A) · $8141 - 2365 = 5776$ (M) · $13056 - 4264 = 8792$ (V) · $4512 - 1841 = 2671$ (F) · $8064 - 467 = 7597$ (H) · $4247 - 1181 = 3066$ (K) · $7398 - 4588 = 2810$ (R) · $6793 - 2645 = 4148$ (L) · $10514 - 3052 = 7462$ (O) · $10864 - 2941 = 7923$ (I) · $3959 - 1525 = 2434$ (N) · $6742 - 2813 = 3929$ (P)

Clue 3 (Place value): "THE BOT STOPS FOR A MAGNET"

What is the value of the 6 in 5,868? = 60 (T) · What is the value of the 9 in 9,878? = 9000 (E) · What is the value of the 2 in 3,208? = 200 (G) · What is the value of the 5 in 503? = 500 (F) · What is the value of the 6 in 6,805? = 6000 (N) · What is the value of the 4 in 9,497? = 400 (A) · What is the value of the 1 in 914? = 10 (R) · What is the value of the 1 in 122? = 100 (P) · What is the value of the 4 in 9,949? = 40 (O) · What is the value of the 5 in 453? = 50 (H) · What is the value of the 9 in 953? = 900 (B) · What is the value of the 4 in 54,609? = 4000 (S) · What is the value of the 6 in 5,683? = 600 (M)

Clue 4 (Rounding): "WE FOUND A GREEN WIRE"

Round 429 to the nearest ten = 430 (W) · Round 5,399 to the nearest thousand = 5000 (I) · Round 54 to the nearest ten = 50 (N) · Round 2,854 to the nearest hundred = 2900 (G) · Round 87 to the nearest ten = 90 (U) · Round 3,027 to the nearest thousand = 3000 (D) · Round 3,685 to the nearest hundred = 3700 (R) · Round 111 to the nearest ten = 110 (F) · Round 517 to the nearest hundred = 500 (O) · Round 1,077 to the nearest hundred = 1100 (A) · Round 6,686 to the nearest thousand = 7000 (E)

Clue 5 (Missing addends): surviving statement is box 9 → Hal

$23 + \underline{\quad} = 31 = 8$ · $5 + \underline{\quad} = 11 = 6$ · $30 + \underline{\quad} = 35 = 5$ · $4 + \underline{\quad} = 6 = 2$ · $37 + \underline{\quad} = 47 = 10$ · $21 + \underline{\quad} = 24 = 3$ · $24 + \underline{\quad} = 28 = 4$ · $35 + \underline{\quad} = 42 = 7$ · $2 + \underline{\quad} = 13 = 11$ · $34 + \underline{\quad} = 46 = 12$ · $32 + \underline{\quad} = 33 = 1$