Robotics Lab Math Challenge

Solve multi-step word problems using robotics data!

Name: _____ **Date:** _____

1 ASSEMBLY LINE

A robot factory needs to assemble 120 circuit boards today. The morning shift robot built 3/5 of the total order, and the afternoon robot built 25 more. How many circuit boards are still needed to complete the order?

Work:

Answer: _____

2 SOLAR ENERGY

A Mars rover starts the day with 300 units of battery power. It uses 18 units of power per hour while driving for 6 hours, then recharges 45 units using solar panels. How many units of battery power does the rover have now?

Work:

Answer: _____

3 SPACE EXPLORATION

Three exploration robots collected rock samples on Mars. Sparky found 48 samples, Bolt found 36 samples, and Gizmo found 60 samples. If they store all the samples equally into 6 storage canisters, how many samples go in each canister?

Work:

Answer: _____

4 QUALITY CONTROL

A microchip sorter robot inspects a crate of 200 chips and rejects 1/4 of them for flaws. The robot then packs the remaining flawless chips into small boxes of 10 chips each. How many boxes can the robot fill completely?

Work:

Answer: _____

5 BATTLE-BOT COMPETITION

In a battle-bot arena, Bot-A earns 15 points for every target hit but loses 8 points for every penalty. During the match, Bot-A successfully hits 12 targets and receives 4 penalties. What is Bot-A's final score?

Work:

Answer: _____

6 DRONE DELIVERY

A drone depot has 160 packages scheduled for delivery. The morning fleet delivers 3/8 of the packages. The depot splits the remaining packages equally among 5 afternoon drones. How many packages does each afternoon drone carry?

Work:

Answer: _____

TEACHER / PARENT

Answer Key

Robotics Lab Math Challenge · Grade 5

1.	A robot factory needs to assemble 120 circuit boards today. The morning shift robot built 3/5 of the total order, and the afternoon robot built 25 more. How many circuit boards are still needed to complete the order?	**23**
2.	A Mars rover starts the day with 300 units of battery power. It uses 18 units of power per hour while driving for 6 hours, then recharges 45 units using solar panels. How many units of battery power does the rover have now?	**237**
3.	Three exploration robots collected rock samples on Mars. Sparky found 48 samples, Bolt found 36 samples, and Gizmo found 60 samples. If they store all the samples equally into 6 storage canisters, how many samples go in each canister?	**24**
4.	A microchip sorter robot inspects a crate of 200 chips and rejects 1/4 of them for flaws. The robot then packs the remaining flawless chips into small boxes of 10 chips each. How many boxes can the robot fill completely?	**15**
5.	In a battle-bot arena, Bot-A earns 15 points for every target hit but loses 8 points for every penalty. During the match, Bot-A successfully hits 12 targets and receives 4 penalties. What is Bot-A's final score?	**148**
6.	A drone depot has 160 packages scheduled for delivery. The morning fleet delivers 3/8 of the packages. The depot splits the remaining packages equally among 5 afternoon drones. How many packages does each afternoon drone carry?	**20**