## MY Homework

## Lesson 9

Problem Solving: Use Logical Reasoning

## Homework He.per $\sim$ Need help? $₫$ connectED.mcgraw-hill.com

Sarah, Parker, Kelly, and Nate each have favorite outfits. Nate wears shorts or pants. Parker always wears something green. Sarah wears shorts, but does not like the color blue. Kelly never wears shorts. Which clothing item could belong to each person?


Understand
What facts do you know?
I know the clothes and colors each person would wear.


What do you need to find?
I need to find which clothing item belongs to each person.

## 2 Plan

I will use logical reasoning to solve the problem.

## 3) Solve

|  | Red Shorts | Blue <br> Shorts | Green <br> Pants | Brown <br> Pants |
| :--- | :---: | :---: | :---: | :---: |
| Sarah | yes | X | X | X |
| Parker | X | X | yes | X |
| Kelly | X | X | X | yes |
| Nate | X | yes | X | X |

The red shorts could belong to Sarah, the blue shorts to Nate, the green pants to Parker, and the brown pants to Kelly.

## 4 Check

Does your answer make sense? Yes. The clues match the answer.

## Problem Solving

## Mathematical PRACTICE $\boldsymbol{2}$ Reason Solve each problem using logical reasoning.

1. Granola bars cost $45 \not \subset$, gum costs $35 \not \subset$, and crackers cost 50¢. Lauren buys two different items. She pays with a $\$ 1$ bill and receives 3 of the same type of coin as change. What did Lauren buy, and what did she receive as change?

Lauren bought gum and crackers and
received 3 nickels as change.
2. There are four cars parked next to each other. The blue car is not in the fourth space. The silver car is in the third space. The black car is two spaces in front of the red car. In what order are the cars parked? blue, black, silver, red
3. There are 21 wheels at the bike shop. The wheels will be used to build tricycles and bicycles. There will be half as many tricycles as bicycles. How many of each type of bike will be built?

## 3 tricycles and 6 bicycles

4. Mitchell has $\$ 18$ to spend. What is the greatest number of any one item he can buy?

| cap | $\$ 9$ |
| :--- | :--- |
| baseball | $\$ 10$ |
| stopwatch | $\$ 9$ |
| yo-yo | $\$ 6$ |
| water bottle | $\$ 3$ |

## 6 water bottles

