Lesson 9   Reteach

Problem Solving: Use Logical Reasoning

Six teams are competing in a volleyball tournament at the school.
Each team has 6 players. Some teams brought 1 extra player in
case someone is injured. There are 39 players at the tournament.
How many teams brought an extra player?

Step 1 Understand	**What facts do you know?** There are 6 teams. Each team has 6 players. Some teams brought 1 extra player. There are 39 players at the tournament. **What do you need to find?** I need to find the number of teams that brought an extra player.
Step 2 Plan	**Make a plan.** I will use logical reasoning to solve the problem. I can write an expression to help me find the answer.
Step 3 Solve	**Carry out your plan.** I will use the facts I know to write an expression. number of teams players per team extra players total players $6 \times 6 + p = 39$ $36 + p = 39$ $36 + \underline{3} = 39$ So, 3 teams each brought 1 extra player.
Step 4 Check	**Make sure your answer is reasonable.** I will use inverse operations to check my answer. $39 - 3 = 36; 36 \div 6 = 6.$ So, the answer makes sense.

   Grade 3 • Chapter 9 Properties and Equations

Lesson 9   Reteach

Problem Solving: Use Logical Reasoning   (continued)

Use logical reasoning to solve.

1. Maya and three friends are going to see a movie. Each ticket costs $6. Each person also bought a small bag of popcorn. If the friends spend a total of $32, how much does each bag of popcorn cost?

Each bag of popcorn costs $2.

2. Cathy, Leon, and Elisa are eating lunch. One has a ham sandwich, one has a peanut butter sandwich, and one has a cheese sandwich. Leon and Cathy do not eat meat. Cathy is allergic to peanuts. Which sandwich does each person eat?

Cathy eats cheese; Leon eats peanut butter; and Elisa eats ham.

3. Fire Station 5 has twice as many fire trucks as Fire Station 9. There are a total of 18 fire trucks. How many fire trucks does Fire Station 9 have?

6 fire trucks

4. Miss Pham has $15 to buy pencils and rulers for her class. The pencils cost $1 each and the rulers cost $2 each. If she buys 4 rulers , how many pencils can she buy?

7 pencils

5. Wesley and Sonia have 15 library books altogether. Sonia has 3 fewer books than Wesley. How many books does each have?

Wesley, 9 books; Sonia, 6 books