3rd Grade Math: Real-World Problems with Two-Step Solutions

What is a Two-Step Problem?

- A **two-step problem** is a math problem that requires you to perform **two different operations** (like addition, subtraction, multiplication, or division) to find the solution. It's important to solve each step one at a time in order to get the correct answer.

How to Solve Two-Step Problems

1. **Step 1: Understand the Problem**

2. Read the problem carefully and figure out what you're being asked to find. Identify the two operations you'll need.

3. **Step 2: Solve the First Step**

Perform the first operation to simplify the problem.

4. **Step 3: Solve the Second Step**

Use the result from the first step to solve the second part of the problem.

Example 1: Buying Books and Notebooks

Problem:

Sarah buys 3 packs of books. Each pack has 4 books. She also buys 2 notebooks, and each notebook costs $3. How much money does Sarah spend in total?

1. **Step 1: Find how many books Sarah buys**

   Sarah buys 3 packs of books, and each pack has 4 books:

$$3 \times 4 = 12 \, \text{books}$$

2. **Step 2: Find how much she spends on the notebooks**

   Sarah buys 2 notebooks, and each one costs $3:

$$2 \times 3 = 6 \, \text{dollars for notebooks}$$

3. **Step 3: Add the costs together**

   Sarah spends money on books and notebooks. To find the total, we add the cost of both:

$$12 + 6 = 18 \, \text{dollars in total}$$

Answer: Sarah spends $18 in total.

Example 2: Planning a Party

Problem:

Tom invites 4 friends to a party. He wants to give each friend 3 slices of pizza. If each pizza has 8 slices, how many pizzas does Tom need to buy?

Steps:

1. **Step 1: Find how many slices of pizza Tom needs**

   Tom has 4 friends, and each friend gets 3 slices:

$$4 \times 3 = 12 \, \text{slices of pizza}$$

2. **Step 2: Find how many pizzas Tom needs**

   Each pizza has 8 slices. To find how many pizzas Tom needs, we divide the total slices by the slices per pizza:

$$12 \div 8 = 1.5$$

   Tom needs to buy **2 pizzas** (since you can't buy half a pizza, he needs to round up).

Answer: Tom needs to buy 2 pizzas.

Example 3: Distributing Candy

Problem:

Mrs. Lee has 24 pieces of candy. She divides them equally among 6 students. After that, she gives each student 2 extra pieces of candy. How many pieces of candy does each student get?

Steps:

1. **Step 1: Find how many pieces of candy each student gets at first**

   Mrs. Lee divides 24 pieces of candy equally among 6 students:

   $$24 \div 6 = 4 \text{ pieces per student}$$

2. **Step 2: Add the extra candy**

   After the first division, each student gets 2 more pieces of candy:

   $$4 + 2 = 6 \text{ pieces per student}$$

Answer: Each student gets 6 pieces of candy.

Example 4: Counting Chairs and Desks

Problem:

A classroom has 5 rows of chairs. Each row has 6 chairs. The classroom also has 4 rows of desks, and each row has 3 desks. How many chairs and desks are there in total?

Steps:

1. **Step 1: Find how many chairs there are**

   There are 5 rows of chairs, and each row has 6 chairs:

   $$5 \times 6 = 30 \, \text{chairs}$$

2. **Step 2: Find how many desks there are**

   There are 4 rows of desks, and each row has 3 desks:

   $$4 \times 3 = 12 \, \text{desks}$$

3. **Step 3: Add the chairs and desks**

   To find the total number of chairs and desks, we add them together:

   $$30 + 12 = 42$$

Answer: There are 42 chairs and desks in total.

Example 5: Running a Race

Problem:

Sam runs 3 miles every day for 5 days. After that, he runs 2 more miles. How many miles does Sam run in total?

Steps:

1. **Step 1: Find how many miles Sam runs in 5 days**

   Sam runs 3 miles each day for 5 days:

   $$3 \times 5 = 15 \, \text{miles}$$

2. **Step 2: Add the extra miles**

   After the 5 days, Sam runs 2 more miles:

   $$15 + 2 = 17 \, \text{miles}$$

Answer: Sam runs 17 miles in total.

Conclusion:

- **Two-step problems** require solving two different operations to find the solution.
- Always read the problem carefully and break it down into smaller steps. Start with the first operation and then use the result to complete the second step.

With practice, solving two-step problems will become easier and more manageable!