Problem-Solving Strategy: Make an Organized List

Make an organized list to solve each problem.

1. You and 3 of your friends—Gary, Janet, and Simone—are going to the movies. How many different ways can the four of you stand in line for the tickets?

2. When you get into the theater, Gary and Janet go to buy popcorn and drinks for everyone. How many different ways could the snacks be carried to your seats?

3. You find out that there are two empty seats in the front row and two seats in the last row. In how many combinations can you and your friends sit? (It does not matter who sits on the left or the right.)

4. The four of you go to a restaurant where each of you can order one hamburger or one cheeseburger. How many different combinations of people and food choices are there?

5. As you leave the theater, you are wearing a red jacket, Gary is wearing a blue jacket, Janet is wearing a green jacket, and Simone is wearing a yellow jacket. If you traded jackets, how many different combinations could you make of people and jackets?