**Picking People**

Questions to ask:

1. Are the objects distinguishable: can we tell our people apart?
2. How many total objects do we have: how many people do we have?
3. How many objects are we picking: how many people will we deal with?
4. What are our objects: are the people the objects in this situation?

Suppose you have to line up 20 people in a row. How many different ways are there to line up these 20 people?

A group has 50 members. It is election time for the group to elect 4 officers of the group: President, Vice-president, Treasurer, and Secretary. How many ways are there to elect these four officers from the entire group?

The clubhouse only has 4 chairs. One is brown, one is yellow, one is red, and one is spotted. However, there are 7 people in the clubhouse. How many different ways are there for people to sit in the chairs, assuming that at most there is 1 person in each chair?