Quiz on 6.4: Permutations

1. Suppose 4 Freshmen (Alice, Bob, Cara, and Dirk), 5 Juniors (Evelyn, Frank, Greg, Harriet, and Ivy), and 3 Seniors (Joe, Katy, and Lyn) are in a club.

a. How many committees can be formed with a President, Vice-President, and Secretary?

b. How many focus groups of 3 people can be formed (where the members of the group receive no distinguishing title)?

2. Suppose 4 people sit at a table.

a. If the table is square and no one chair is the "head" of the table, how many different seating arrangements are there? Draw them.

b. If the four people are two couples, and you want the couples to sit across from each other, how many different seating arrangements are there? Draw them.