Homework exercises due Aug. 30

Show your work! Write neatly!

1. A company has 12 new employees: 8 males and 4 females. To get a better insight into their views on various benefits, the HR department forms a focus group from these new employees. Five of these employees will be selected at random to be on this focus group.

   (a) How many different focus groups are possible?

   (b) How many of these are all male?

2. Ten employees are to be divided into three job assignments, with five assigned to Job 1, three assigned to Job 2, and 2 assigned to Job 3. How many ways are there to assign the jobs?

3. Seven applicants have applied for 2 jobs. How many ways can the jobs be filled if:

   (a) The first person chosen receives a higher salary than the second.

   (b) The two jobs have the same pay and work requirements

4. 6 different tulips and 5 different roses are to be put in a row for a party decoration. How many arrangements are possible if:

   (a) The flowers are randomly ordered without regard to tulip/rose identity.

   (b) All of the tulips have to be together.

5. How many distinguishable ways are there to rearrange the letters of the word "employee"?