Extra credit:

9. How many ways are there for 10 women and 6 men to stand in a line so that no two men stand next to each other?

1 pt.

$P(10,10)$ = the number of permutations of women.

$P(11,6)$ = the number of permutations of men (there are 11 spots where a man could stand next to a woman.)

The total number of possible orderings is

$$P(10,10) \cdot P(11,6)$$

$$= 10! \cdot \left(\frac{11!}{5!}\right) = 1,207,084,032,000$$