Show your work please.

1. How many 3-permutations are there of a, b, c, d?
2. A club consists of six distinct men and seven distinct women. In how many ways can we select a committee of three men and four women?
3. A club consists of six distinct men and seven distinct women. In how many ways can we select a committee of four persons that has at least one woman?
4. A club consists of six distinct men and seven distinct women. In how many ways can we select a committee of four persons that has at most one man?
5. Two dice are rolled, one blue and one red. How many outcomes give the sum of 7 or the sum of 11?
6. Two dice are rolled, one blue and one red. How many outcomes have at least one die showing 2?
7. How many eight-bit strings begin and end with 1?
8. How many eight-bit strings have exactly two 1's?
9. A six-person committee composed of Alice, Ben, Connie, Dolph, Egbert, and Francisco is to select a chairperson, secretary, and treasurer. How many selections are there in which Dolph is an officer and Francisco is not an office?
10. A six-person committee composed of Alice, Ben, Connie, Dolph, Egbert, and Francisco is to select a chairperson, secretary, and treasurer. How many selections are there in which Ben is either chairperson or treasurer?