Quiz #1

State if each scenario involves a permutation or a combination. Then find the number of possibilities.

1. A team of 8 basketball players needs to choose a captain and co-captain.
2. There are 45 applicants for three Computer Programmer positions.
3. Castel and Joe are planning trips to three countries this year. There are 7 countries they would like to visit. One trip will be one week long, another two days, and the other two weeks.

4. There are 15 applicants for four jobs: Computer Programmer, Software Tester, Manager, and Systems Engineer.
5. A group of 45 people are going to run a race. The top three runners earn gold, silver, and bronze medals.
6. There are 110 people at a meeting. They each shake hands with everyone else. How many handshakes were there?
7. A team of 17 softball players needs to choose three players to refill the water cooler.
8. The student body of 10 students wants to elect a president, vice president, secretary, and treasurer.