Algebra 2

Name_____ ID: 1

Assignment

Date_____   Period_____

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

1) Amanda and Krystal are planning trips to four countries this year. There are 11 countries they would like to visit. One trip will be one week long, another two days, another two weeks, and the other a month.

2) The student body of 235 students wants to elect two representatives.

3) There are 20 applicants for two Manager positions.

4) Selecting which nine players will be in the batting order on a 12 person team.

5) A group of 35 people are going to run a race. The top 7 finishers advance to the finals.

6) A team of 12 softball players needs to choose a captain and co-captain.

7) A group of 24 people need to take an elevator to the top floor. They will go in groups of six. They are deciding who will take the elevator on its second trip.

8) A team of 15 lacrosse players needs to choose three players to refill the water cooler.

9) The student body of 60 students wants to elect four representatives.

10) You are setting the combination on a five-digit lock. You want to use the numbers 12345 but don't care what order they are in.

11) There are 25 applicants for four jobs: Computer Programmer, Software Tester, Manager, and Systems Engineer.

12) A group of 40 people are going to run a race. The top three runners earn gold, silver, and bronze medals.

Answers to Assignment (ID: 1)

1) Permutation; 7,920
2) Combination; 27,495
3) Combination; 190
4) Combination; 220
5) Combination; 6,724,520
6) Permutation; 132
7) Combination; 134,596
8) Combination; 455
9) Combination; 487,635
10) Permutation; 120
11) Permutation; 303,600
12) Permutation; 59,280