

**Extra Counting Problems**

Show all appropriate work. Use good Notation.

1. How many different signals can be made from 5 different flags if each signal is to consist of 3 flags hung in a horizontal row?
  
  
  
  
  
  
  
  
  
  
2. How many different numbers of 3 different digits can be formed using the digits 0, 2, 4, 6, 8, if zero cannot be used as the first digit?
  
  
  
  
  
  
  
  
  
  
3. How many different sums of money, each composed of 3 coins, can be formed from a cent, nickel, a dime, and a quarter?
  
  
  
  
  
  
  
  
  
  
4. A man has 8 pairs of pants, 12 shirts, 15 ties and 6 sport coats. How many different outfits can he wear?
  
  
  
  
  
  
  
  
  
  
5. There are 5 red and 10 blue balls in a box.
  - a. How many different groups (color-wise) of 6 balls can you select?
  
  
  
  
  
  
  
  
  
  
  - b. How many ways can you pick a group of 6 balls with *exactly* 2 red balls?
  
  
  
  
  
  
  
  
  
  
  - c. How many ways can you pick a group of 6 balls with *at least* 1 red ball?