1. A restaurant offers 8 appetizers and 14 entrées. How many choices do you have if:

   (a) you will eat one dish - either an appetizers or an entrée?

   (b) you are extra hungry and want to eat both an appetizer and an entrée?

2. How many two letter "words" start with either A or B?

3. How many two letter "words" start with a vowel?

4. Think about the methods you used to solve the counting problems above. Write down the rules for these methods, and why they work.

5. Do your rules work? A standard deck of playing cards has 26 red cards and 12 face cards.

    (a) How many ways can you select a card which is either red or a face card?

    (b) How many ways can you select a card which is both red and a face card?

    (c) How many ways can you select two cards so that the first one is red and the second one is a face card?

Homework: A rook can move only in straight lines (not diagonally). Fill in each square of the chess board below with the number of different shortest paths the rook in the upper left corner can take to get to the square. For example, one square is already filled in - there are four paths from the rook to the square: DRRR, RDRR, RRDR and RRRD.