

Indicators

Objective:

4.01 Develop fluency with counting strategies to determine the sample space for an event. Include lists, tree diagrams, frequency distribution tables, permutations, combinations, and the Fundamental Counting Principle.

Vocabulary and Resources		
sample space	favorable outcome	possible outcome

A. John, Paul, George and Roger were all listening to the same radio station when it was announced that there were free tickets being given away to the latest movie. All four placed a phone call. List all possibilities for the order in which these four calls could be received.

B. Nancy will choose one salad, one dessert, and one drink for her lunch. The salad choices are: chicken, tuna, or ham. The dessert choices are: chocolate cake, ice cream, or cookie. The drink choices are milk or juice. How many different lunch combinations are possible?

C. Count the total number of letters in the first and last names for each student in your class and record the information in a frequency distribution chart similar to the one below.

Number of Letters in Name	Tally	Frequency
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

- How many students have 5 letters in their name? 12 letters? 16 letters?
- What is the probability that a new student added to your class will have 12 letters in his/her name? 5 letters?
- Find the median, mode and range for this set of data.

D. Clay has three pairs of shorts and five coordinating shirts. How many days can Clay wear a different combination of shirt and shorts.

E. The swim coach needs to select four swimmers from a group of six who are qualified to swim in the freestyle relay. How many different relay teams are possible?