

Timed Expectations



**Each Team needs to connect 4 calculators to the Hub using the cables near the door.
Log into TI Navigator and do warm up**

Have Assignment out to go over

In your journal, create a Frayer Model for Tree Diagram

**The following students need to enter their Data on iPad using the QR Code posted around the room
Jacob T, Jeremiah J, Omar G, Jenae T, Zach C**

Probability Assignment #1

1. A _____ is a sample in which each member of a population is equally likely to be selected.
2. A sample is _____ when certain individuals are favored in a selection.
3. The result of an experiment is called an _____ or an _____.
4. The set of all possible outcomes is known as a _____.

5. Each letter in the word flower is written on a card and the cards are shuffled. List a sample space for the outcome of drawing one card.

6. Two balls are to be drawn successively from a bag known to contain only yellow balls and purple balls. List a sample space for the experiment.

7. List a sample space that indicates all possible outcomes when two dice are thrown.

8. List a sample space to show all possible outcomes when a family has three children.

Permutations

Arrangement of objects in a specific order

How many ways can you arrange the numbers 2, 3, 4, and 5?

24 ways



How many digits are we going to use?

Now, how many numbers can we choose from for the 1st digit? 2nd digit?


3rd digit?

4th digit?

What about 6 objects?

So the total number of permutations of n objects without repetition would be

also known as $n!$ or n factorial.



From these 6 students you have to choose a president, vice-president, secretary and treasurer for the club. In how many ways can you do this?

$${}_n P_r$$

n objects taken r at a time

$${}_n P_r = \frac{n!}{(n-r)!}$$

$${}_6 P_4 =$$

$${}_{10} P_4 =$$

$${}_5 P_4 =$$

Examples

1. In how many different ways can five books be arranged on a shelf?

2. Milltown has eight grocery stores and six meat markets. In how many ways can you buy a pound of hot dogs and a bag of flour?

3. How many two digit numbers can be made from the six digits 7, 2, 4, 5, 9, 3 if no digit can be used more than once?

4. How many integers of three decimal places can be formed from the digits 5, 1, 8, 4 if repetition is allowed?

5. How many even integers of four places can be formed from the digits 1, 2, 3, 4, 5?

What if all the objects are not different?

Look at the arrangement of the numbers 1, 2, 2, and 3. What do you notice?

Example

How many different permutations can be made using all the letters of the word Connecticut?

ASSIGNMENT:
Probability Assignment #2