Weekly School
grade 9
2nd week (October)
(24) probability

Charactaristics of a random experiment

- The experiment can be repeted any number of times.
- All the possible outcomes of the experiment are known before the experiment is carried out.
- The outcome of the experiment cannot be stated with certainty before the experiment carried out.
- When the experiment is repeated, a pattern cannot be recognized in the outcomes.

- All the set of possible outcomes of a random experiment is called its **sample space** (S)

Example -: Rolling a cube die which is marked from 1 to 6

S = { 1,2,3,4,5,6,}

Here, n(S) = 6

Do the exercises 24.1 and 24.2 in your text book

- An event is a subset of the sample space of a **random Experiment.**

- When the sample space of the random experiment is considered, if each outcome is equally likely to occur, then that experiment is called an experiment is called an experiment with **equally likely outcomes.**

probability of a selected outcome $= \frac{1}{\text{total number of outcome in the sample space}}$

Probability of the event $= \frac{\text{Number of elements in the event}}{\text{Number of elements in the sample space}}$

If the probability of an event A is P(A)

$$P(A) = \frac{n(A)}{n(S)}$$

example -: Drawing a card an at random from the box recording the number from 1 to 10

i. Write the sample space
   S = {1,2,3,4,5,6,7,8, 9,10}
ii. The event Being an add number is B, write the Set B and find the probability of drawing a card with an add number

B = {1,3,5,7,9}

$P(B) = \frac{n(B)}{n(S)} = \frac{5}{10} = \frac{1}{2}$