Probability:

Introduction:

Probability is about determining the likelihood of an event or experiment.

Example: Probability of getting a head when tossing a coin.

P(H) = ½ = 50%

P(T) = ½ = 50%

Example: Rolling a dice

P(x=1) = 1/6 = 16.6 %

Mutually exclusive events:

Two events are mutually exclusive if they cannot occur at the same time.

Example: When tossing a coin, we cannot get head and tail at the same time. Therefore the outcomes that we are getting from tossing a coin are mutually exclusive.

Addition Rule (For mutually exclusive events):

Example: P (H or T) = P(H) + P(T) = ½ + ½ = 1

Example: P(1 or 5) = P(1) + P(5) = 1/6 + 1/6 = 1/3

Addition Rule (For non mutually exclusive events):

Eg: Taking a card from a deck of cards

We may get a king card which is a heart also, i.e, King of Hearts.

P(K or Heart) = P(K) + P(Heart) – P(K and Heart) = 4/52 + 13/52 – 1/52 = 4/13