Date :- 25/01/19

Exercise - 1

$n = 7$

$$\sum_{i=1}^{7} x_i = 19 \qquad \sum_{i=1}^{7} y = 556.67$$

$$\sum_{i=1}^{7} x^2 = 63 \qquad \sum_{i=1}^{7} y^2 = 52142.25$$

$$\sum_{i=1}^{7} x_i y_i = 1739.51$$

$$b = r \frac{S_y}{S_x} = \frac{S_{xy}}{S_x}$$

$$= 0.7619 \sqrt{\frac{1}{6}\left[52140.25 - \frac{556.67^2}{7}\right]}$$

$$= \frac{1}{6}\left[63 - \frac{19^2}{7}\right]$$

$$= 19.998$$

$$= 20$$

$$S_{xy} = \frac{1}{n-1}\left[\sum^{n}\right.$$

$$a = \bar{y} - b\bar{a}$$

$$= \frac{556.67}{7} - 20\frac{14}{30} = 25.24$$

$$y = 25.24 + 20a$$

Chapter 4 Probability and Probability Distribution

~~Prob~~

- heads or tails → a simple event
- tossing a die → (cannot be broken down into anything else)

Exercise - 1

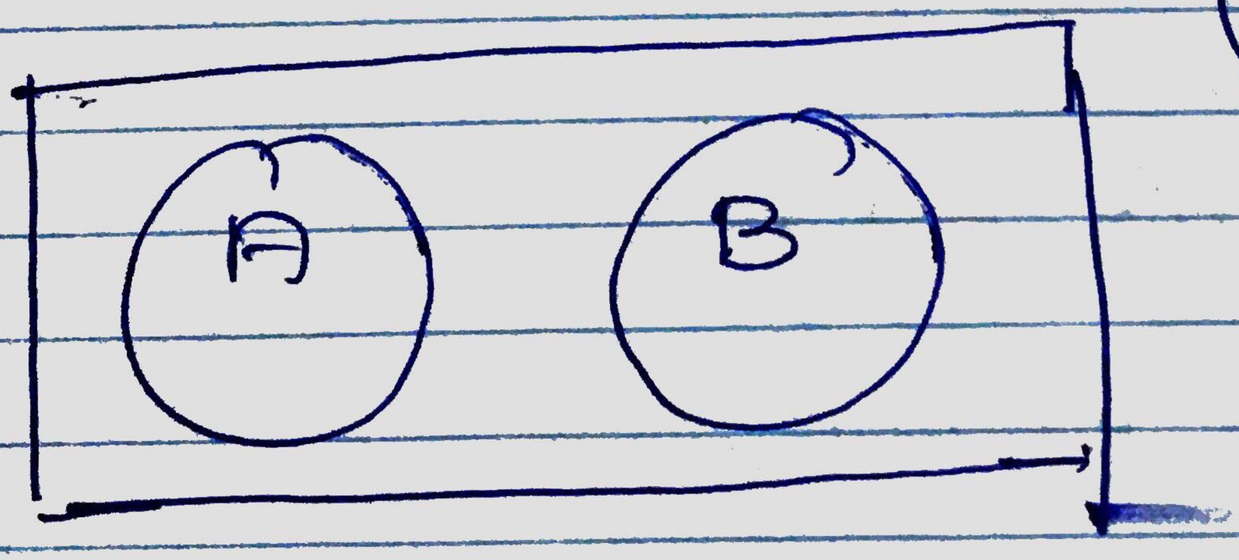
1) {H, T}

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

An event → A collection of simple events.

Sample Spaces:

- Two mutually exclusive Events: (have nothing in common)



Ex-3.001 of 10

1.) $S = \{0, 0.5, 1, 1.5 \ldots\ldots 10\}$

2) $S = \{F, D-, D, D+, C-, C, C+ \ldots\ldots A+\}$

3) $S = \{H, T\}$

4) $S = \{1, ----100\}$

5) $S = \{0 \leq x < \infty\}$

6) $S = \{HT, TT, HH, TH\}$

Exercise 4.

A. No

B. Yes.

C. Yess

Exercise 5

1. P(one head)

$= \{HT \text{ or } TH\}$

$= P(HT) + P(HT)$

$= \frac{1}{4} + \frac{1}{4}$ → There are 4 events total (HT, TH, TT, HH)

$= \frac{1}{2}$.

Exercise 6 -

1) $P(\text{heads}) = (HT, TH, HH, TT)$

$= \left(\frac{1}{4} + \frac{1}{4} + \frac{1}{4}\right)$

$P(\text{odd no.}) = \{1, 3, 5\}$

$= \left(\frac{1}{6} + \frac{1}{6} + \frac{1}{6}\right)$

$P(\text{heads \& an odd no.}) =$

$= \left(\frac{1}{6} \times 3\right) \times \left(\frac{1}{4} \times 3\right)$

$= \frac{1}{2} \times \frac{3}{4}$

$= \frac{3}{8}$

2) $P(\text{heads or tails}) =$