Question 10.13.3.25

A coin is tossed 3 times. List the possible outcomes. Find the probability of getting (i) all heads (ii) at least 2 heads

solution: As the coin is tossed 3 times we will get 8 different outcomes.

The list of possble outcomes is HHH,HHT,HTH,THH,HTT,THT,TTH,TTT.

The sample space is $n(S) = 8$.

(i) all heads

$$\Pr\left(\text{all heads}\right) = \frac{\text{getting all three as heads}}{\text{number of total outcomes}} \tag{1}$$

$$= \frac{1}{8} \tag{2}$$

(ii) at least 2 heads

$$\Pr\left(\text{atleast 2 heads}\right) = \frac{\text{getting 2 or more heads}}{\text{number of total outcome}} \tag{3}$$

$$= \frac{4}{8} \tag{4}$$

$$= \frac{1}{2} \tag{5}$$