AI1110 ASSIGNMENT-4

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Abstract—**This document contains the solution for Assignment 4 (NCERT GRADE 10 CHAPTER 15 Example 9)**

EXAMPLE 9 :

Harpreet tosses two different coins simultaneously (say one is ₹1 and other is ₹2). What is the probability that she gets atleast one head ?

Solution :

given that harpreet tosses two coins. so the possible outputs are HH,HT,TH,TT.

we need to calculate probability where she gets atleast 1 head i.e our required sample spacees are HH,HT,TH.

so the number of possible outcomes so that our required event can happen is 3. Total number possible outcomes are 4.

Let $\Pr(X = 1)$ be the probability for getting atleast one head and $\Pr(X = 0)$ be the probability for getting zero heads

therefore

$$\Pr(X = 1) = \frac{3}{4} \tag{1}$$

we may even proceed in this way ,like we actually require atleast 1 head in our outcome , so this means we should not get TT on outcomes

so our required probability is $1 - \Pr(X = 0)$ i.e

$$\Pr(X = 1) = 1 - \Pr(X = 0) = 1 - \frac{1}{4} = \frac{3}{4} \tag{2}$$

we may also verify that

$$\Pr(X = 0) + \Pr(X = 1) = 1 \tag{3}$$