

# Assignment 4

## AI1110: Probability and Random Variables

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## CBSE Probability Grade 9

**Example 7** The percentage of marks obtained by a student in the monthly unit tests are given below:

Unit test	I	II	III	IV	V
Marks obtained	69	71	73	68	74

TABLE 1

Based on this data, find the probability that the student gets more than 70% marks in a unit test.

**Solution.** Let a random variable  $X \in \{1, 2, 3, 4, 5\}$  denote the five unit tests respectively.

The probability that the student gets more than 70% marks in a unit test is given by:

$$\Pr(X \in \{2, 3, 5\}) = \frac{n(X \in \{2, 3, 5\})}{n(X \in \{1, 2, 3, 4, 5\})} \quad (1)$$

$$= \frac{3}{5} \quad (2)$$

$\therefore$  The probability that the student gets more than 70% marks in a unit test is 0.6