Assignment 1
NCERT Exampler

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I. QUESTION 10.13.1.24

One ticket is drawn at random from a bag containing tickets numbered 1 to 40.The probability that the selected ticket has a number which is a multiple of 5 is (a) $\frac{1}{5}$ (b) $\frac{3}{5}$ (c) $\frac{4}{5}$ (d) $\frac{1}{3}$

Solution:

There are a total of 8 numbers which are multiple of 5 in the range or 1 to 40. Therefore, the probability of selecting a number that is a multiple of 5

$$p_X(\text{Multiple of 5}) = \frac{\text{no. of multiples of 5}}{\text{Total possible outcomes}} \quad (1)$$

$$= \frac{8}{40} \quad (2)$$

$$= \frac{1}{5} \quad (3)$$

Among the given options, $\frac{1}{5}$ is the required solution. Therefore, the correct answer is option (a) $\frac{1}{5}$.