## EE23010 NCERT Exemplar

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## **Question 10.13.3.29**

The king, queen and jack of clubs are removed from a deck of 52 playing cards and then well shuffled. Now one card is drawn at random from the remaining cards. Determine the probability that the card is

- (i) a club
- (ii) 10 of hearts

## **Solution:**

Total number of cards left

$$52 - 3 = 49 \tag{1}$$

| Random variable | Sample space | Value | Event                      | Probability     |
|-----------------|--------------|-------|----------------------------|-----------------|
| $X_1$           | 49           | 1     | the card is a club         | $\frac{10}{49}$ |
| $X_2$           | 49           | 1     | the card is a 10 of hearts | $\frac{1}{49}$  |

TABLE I DISTRIBUTION