EduSahara™ Assignment

Name : Box problems

Chapter : Probability

Grade : SSC Grade X

1. A bag contains 8 white marbles, 52 pink marbles, 36 red marbles and 12 blue marbles. One marble is drawn at random from the bag. Find the probability that the marble drawn is blue.

   (i) 0 (ii) $\frac{8}{9}$ (iii) $\frac{2}{9}$ (iv) $\frac{1}{9}$ (v) $\frac{1}{5}$

2. A bag contains 20 pink balls, 6 white balls, 30 blue balls and 20 black balls. One ball is drawn at random from the bag. Find the probability that the ball drawn is not blue.

   (i) $\frac{8}{13}$ (ii) $\frac{23}{38}$ (iii) $\frac{11}{19}$ (iv) $\frac{12}{19}$ (v) $\frac{15}{38}$

3. A bag contains 35 black balls, 75 pink balls, 30 blue balls and 55 gray balls. One ball is drawn at random from the bag. Find the probability that the ball drawn is gray or black.

   (i) $\frac{5}{13}$ (ii) $\frac{6}{13}$ (iii) $\frac{1}{2}$ (iv) $\frac{7}{13}$

4. A bag contains 2 white marbles, 10 red marbles, 6 pink marbles and 30 gray marbles. One marble is drawn at random from the bag. Find the probability that the marble drawn is neither pink nor red.

   (i) $\frac{2}{3}$ (ii) $\frac{1}{3}$ (iii) $\frac{3}{4}$ (iv) 1

5. A carton consist of 92 shirts of which 79 are good, 8 have minor defects and 5 have major defects. Akhil, a trader, will only accept the shirts which are good, but Swathi, another trader, will only reject the shirts which have major defects. One shirt is drawn at random from the carton. What is the probability that it is acceptable to Akhil?

   (i) $\frac{80}{93}$ (ii) $\frac{13}{92}$ (iii) $\frac{79}{92}$ (iv) $\frac{20}{23}$ (v) $\frac{39}{46}$

6. A carton consist of 82 shirts of which 72 are good, 9 have minor defects and 1 have major defects. Satya, a trader, will only accept the shirts which are good, but Parvathi, another trader, will only reject the shirts which have major defects. One shirt is drawn at random from the carton. What is the probability that it is acceptable to Parvathi?

   (i) 1 (ii) $\frac{81}{82}$ (iii) $\frac{40}{41}$ (iv) $\frac{82}{83}$ (v) $\frac{1}{82}$

7. A lot of 27 bulbs contain 9 defective ones. One bulb is drawn at random from the lot. What is the probability that this bulb is defective ?

   (i) $\frac{1}{3}$ (ii) $\frac{2}{3}$ (iii) 0 (iv) $\frac{1}{2}$

8. A lot of 20 bulbs contain 5 defective ones. One bulb is drawn at random from the lot. Suppose the bulb drawn is not defective and is not replaced. Now one bulb is drawn at random from the rest. What is the probability that this bulb is not defective ?

   (i) $\frac{15}{19}$ (ii) $\frac{3}{4}$ (iii) $\frac{5}{19}$ (iv) $\frac{13}{19}$ (v) $\frac{14}{19}$

9. A box contains 90 discs which are numbered from 1 to 90. If one disc is drawn at random from the box, find the probability that it bears a two-digit number.

(i) $\frac{4}{5}$ (ii) 1 (iii) $\frac{9}{10}$ (iv) $\frac{10}{11}$ (v) $\frac{1}{10}$

10. A box contains 60 discs which are numbered from 1 to 60. If one disc is drawn at random from the box, find the probability that it bears a perfect square number.

(i) $\frac{1}{10}$ (ii) $\frac{53}{60}$ (iii) $\frac{7}{60}$ (iv) $\frac{8}{61}$ (v) $\frac{2}{15}$

11. A box contains 80 discs which are numbered from 1 to 80. If one disc is drawn at random from the box, find the probability that it bears a number divisible by 5.

(i) 0 (ii) $\frac{1}{3}$ (iii) $\frac{1}{5}$ (iv) $\frac{4}{5}$ (v) $\frac{2}{5}$

Assignment Key

1) (iv)	2) (ii)	3) (ii)	4) (i)	5) (iii)	6) (ii)
7) (i)	8) (v)	9) (iii)	10) (iii)	11) (iii)	