



Question 11:

Total number of balls = $7 + 5 + 3 = 15$

(i) Total number of red and white balls = $(7 + 5) = 12$

$$P(\text{getting a red or white balls}) = \frac{12}{15} = \frac{4}{5}$$

(ii) Total number of black balls = 3

$P(\text{not black ball}) = 1 - P(\text{getting a black ball})$

$$= 1 - \frac{3}{15} = \frac{12}{15} = \frac{4}{5}$$

(iii) Total number of white and black balls = $5 + 3 = 8$

$P(\text{neither white nor black}) = 1 - P(\text{either white or black})$

$$= \left[1 - \left(\frac{5+3}{15} \right) \right] = \left(1 - \frac{8}{15} \right) = \frac{7}{15}$$

Question 12:

Total number of balls = $5 + 7 + 4 + 2 = 18$

(i) Total number of blue and white balls = $(5 + 2)$

$$P(\text{getting a white or blue ball}) = \frac{5+2}{18} = \frac{7}{18}$$

(ii) Total number of red and black balls = $(7 + 4)$

$$P(\text{getting a Red or black ball}) = \frac{7+4}{18} = \frac{11}{18}$$

(iii) Total number of white balls = 5

$$P(\text{not white ball}) = 1 - P(\text{white ball}) = \left(1 - \frac{5}{18} \right) = \frac{13}{18}$$

(iv) Total number of white and black balls = $(5 + 4)$

$P(\text{neither white nor black ball}) = 1 - P(\text{either white or black ball})$

$$= \left[1 - \frac{(5+4)}{18} \right] = \left(1 - \frac{9}{18} \right)$$

$$= \frac{9}{18} = \frac{1}{2}$$

Question 13:

A bag contains 5 red, 4 blue, 3 green balls

total number of balls = 12

(i) Number of red balls = 5

Probability of getting a red ball = $5/12$

(ii) Number of green balls = 3

The number of balls which are not green = $12 - 3 = 9$

Probability of getting a ball which is not of green color = $9/12 = 3/4$

Question 14:

Let the number of red balls be x .

Then,

$$P(\text{drawing a white ball}) = \frac{4}{4+x}, \text{ and}$$

$$P(\text{drawing a red ball}) = \frac{x}{4+x}$$

$$\therefore \frac{x}{4+x} = 2 \left(\frac{4}{4+x} \right)$$

$$\Rightarrow x(4+x) = 8(4+x)$$

$$\therefore x = 8$$

Hence, number of red balls is 8

***** END *****