Question 37:

Let the number of white balls be x

$\therefore$ number of red balls = 27 - x

Probability of choosing a red ball = $\frac{27-x}{27}$

Given that probability of getting a red ball is $\frac{2}{3}$

$$\Rightarrow \frac{27-x}{27} = \frac{2}{3}$$

$$\Rightarrow 27 - x = 18$$

$$\therefore x = 27 - 18 = 9$$

$\therefore$ number of white balls = 9

Question 38:

Spinning arrow may come to rest at one of the 12 numbers

total number of outcomes = 12

(i) Probability that it will point at 6 = $\frac{1}{12}$

(ii) Even numbers are 2, 4, 6, 8, 10 and 12. There are 6 numbers.

$\therefore$ Probability that it points at even numbers = $\frac{6}{12} = \frac{1}{2}$

(iii) The prime numbers are 2,3 5, 7 and 11. There are 5 prime numbers.

$\therefore$ Probability that it points at prime number = $\frac{5}{12}$

(iv) There are 2 numbers divisible by 5. These are 5 and 10.

$\therefore$ Probability that a number is a multiple of 5 = $\frac{2}{12} = \frac{1}{6}$

Question 39:

There are 18 cards having numbers 1, 3, 5, 7, 35 kept in a bag

(i) Prime numbers less than 15 are 3, 5, 7, 11, 13

There are 5 numbers.

Probability that card drawn bears a prime number less than 15 = 5/18

(ii) There is 1 number 15, which is divisible by both 3 and 5

Probability of drawing a card bearing a number divisible by both 3 and 5 = 1/18

********** END **********