

QUESTION

1. The following table shows the results of a survey of 100 people regarding their preferred mode of transport to work.

Mode of Transport	Number of People
Car	45
Bus	30
Cycling	15
Walking	10

2. A box contains 10 balls, 3 of which are red and 7 are blue. A ball is drawn at random. What is the probability of drawing a red ball?

ANSWER

1. The probability of a person choosing a particular mode of transport is given by the ratio of the number of people who chose that mode to the total number of people surveyed.

Mode of Transport	Number of People	Probability
Car	45	$\frac{45}{100} = 0.45$
Bus	30	$\frac{30}{100} = 0.30$
Cycling	15	$\frac{15}{100} = 0.15$
Walking	10	$\frac{10}{100} = 0.10$

2. The probability of drawing a red ball is given by the ratio of the number of red balls to the total number of balls.

Color	Number of Balls	Probability
Red	3	$\frac{3}{10} = 0.30$
Blue	7	$\frac{7}{10} = 0.70$

EXERCISES

1. A bag contains 12 balls, 5 of which are green and 7 are yellow. A ball is drawn at random. What is the probability of drawing a green ball?

2. A box contains 20 balls, 8 of which are red and 12 are blue. A ball is drawn at random. What is the probability of drawing a red ball?

3. A survey of 150 people found that 60 preferred cycling, 40 preferred walking, and 50 preferred the bus. What is the probability of a person choosing cycling?

4. A box contains 10 balls, 4 of which are red and 6 are blue. A ball is drawn at random. What is the probability of drawing a blue ball?

5. A survey of 200 people found that 80 preferred the car, 100 preferred the bus, and 20 preferred cycling. What is the probability of a person choosing the bus?