

Probability Assignment-2

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Problem Assigned -: 10.15.2.5

Question—A jar contains 24 marbles, some are green and others are blue. If a marble is drawn at random from the jar, the probability that it is green is $\frac{2}{3}$. Find the number of blue balls in the jar.

SOLUTION -:

Given,

Variables	Definition	values
g	Green marbles	
b	BLue marbles	
n	Total marbles = $g + b$	24
p	Pr(g)=Probability of getting green marble	0.67

TABLE 0
GIVEN INFORMATION

Probability of an event E is defined as

$$\Pr(E) = \frac{\text{Number of outcomes favourable to event } E}{\text{Total number of outcomes}} \quad (1)$$

$$\Pr(g) = \frac{g}{n} = \frac{2}{3} \quad (2)$$

$$g = \frac{2}{3} \times 24 = 16 \quad (3)$$

$$n = b + g \quad (4)$$

$$b = n - g = 24 - 16 \quad (5)$$

$$b = 8 \quad (6)$$