

3. let no. of blue balls = x

no. of red balls = 5

total balls = $5 + x$

$$2P(\text{red ball}) = P(\text{blue ball})$$

$$2 \times \frac{5}{x+5} = \frac{x}{x+5}$$

$$\frac{10}{x+5} = \frac{x}{x+5}$$

$$\Rightarrow 10(x+5) = x(x+5)$$

$$\Rightarrow x(x+5) - 10(x+5) = 0$$

$$\Rightarrow (x+5)(x-10) = 0$$

$$\Rightarrow x+5=0, \quad x-10=0$$

$$\Rightarrow x = -5, \quad x = 10$$

rejected

\therefore no. of blue balls = 10