

Chapter Name: Bahupadhangal

Marks : (3)

Quest:

The area of a rectangle is represented by the polynomial $P(x) = x^2 - 6x + 5$,

a) If the length is $(x - 1)$, find the breadth as a first degree polynomial

b) If the length is 5 what is its breadth?

Hint:

a) Length = $(x - 1)$ (1)

If Breadth is $x - b$ then

$$\begin{aligned} \text{Area} &= x^2 - 6x + 5 = (x - 1)(x - b) \\ &= x^2 - (1 + b)x + b \end{aligned}$$

$b = 5$

Breadth = $(x - 5)$ (1)

b) Length = $x - 1 = 5$, $x = 6$

Breadth = $x - 5 = 6 - 5 = 1$ (1)