Exercise 17B

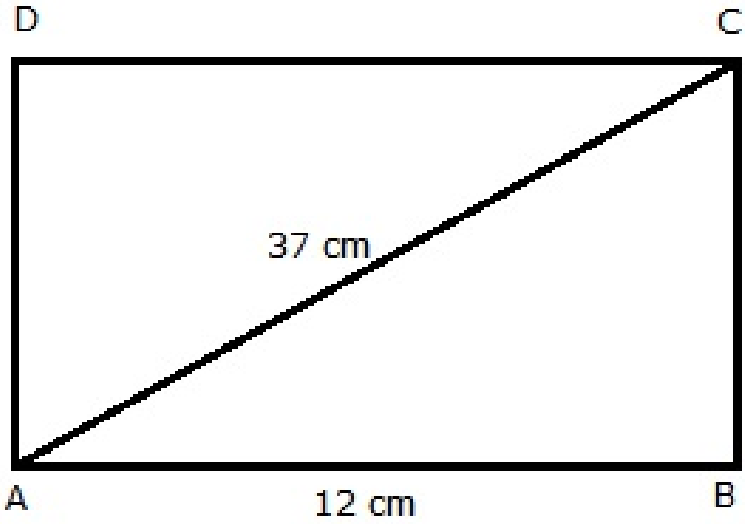
Question 1:
Let the length of plot be x meters
Its perimeter = 2 [length + breadth]
= 2(x + 16) = (2x + 32) meters
$\therefore (2x + 32) = 75 \Rightarrow 2x = 75 - 32$

$\Rightarrow 2x = 43 \Rightarrow x = \frac{43}{2} = 21.5$

Length of the rectangle is 21. 5 meter
Area of the rectangular plot = length × breadth = (16 × 21.5) m^2 = 344 m^2
The length = 21.5 m and the area = 344 m^2

Question 2:
Let the breadth of a rectangular park be x meter
Then, its length = 2x meter
∴ perimeter = 2(length + breadth)
= 2(2x + x) = 6x meters
∴ 6x = 840 m [since 1 km = 1000 m]
⇒ x = 140 m
Then, breadth = 140 m and length = 280 m
Area of rectangular park = (length × breadth) = (140 × 280) m^2 = 39200 m^2
Hence, area of the park = 39200 m^2

Question 3:
Let ABCD be the rectangle in which AB = 12 cm and AC = 37 m



By Pythagoras theorem, we have

$BC = \sqrt{AC^2 - AB^2}$ units

$= \sqrt{(37)^2 - (12)^2}$ cm^2

$= \sqrt{(37 + 12)(37 - 12)}$ cm

$= \sqrt{49 \times 25}$ cm

$= \sqrt{1225}$ cm = 35 cm

Thus, length = 35 cm and breadth = 12 cm

Area of rectangle = (12 × 35) cm^2 = 420 cm^2

Hence, the other side = 35 cm and the area = 420 cm^2

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