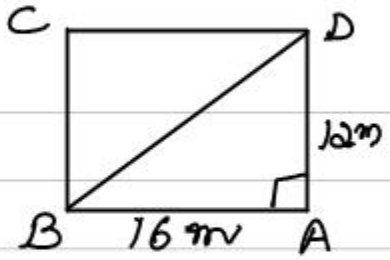
Class VII, ex 15D, Page 8

Solutions by Dev Anoop

(15) ABCD is a rectangle



$\angle A = 90°$ (each ∠ of rect.)

In rt △ BAD

$BD^2 = AB^2 + AD^2$ (pythagoras theorem)

$= 16^2 + 12^2$

$= 256 + 144$

$= 400$

$BD = \sqrt{400}$

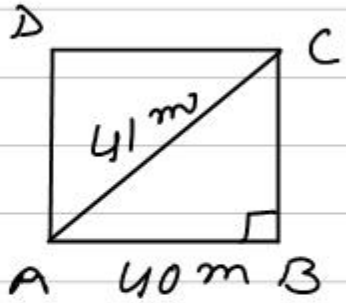
$= \sqrt{2^2 \times 2^3 \times 5^2}$

$= 2 \times 2 \times 5$

$= 20$

$\therefore$ diagonal $= 20$ m

(16) ABCD is a rectangle



$\therefore \angle B = 90°$ (each ∠ of rect.)

In rt △ ABC

$AC^2 = AB^2 + BC^2$

$41^2 = 40^2 + BC^2$

$\Rightarrow BC^2 = 41^2 - 40^2$

$= (41 - 40)(41 + 40)$

$= 1 \times 81$

$BC = \sqrt{3^2 \times 3^2}$

$= 3 \times 3$

$= 9$

Perimeter of rect. $= 2(l + b)$

$= 2(40 + 9)$

$= 2 \times 49$

$= 98$ m