

General direction for the students :-Whatever be the notes provided , everything must be copied in the Maths Copy and then do the Home work in the same Copy.

Exercise 13.3

13. b) Consider $\angle DEC = \angle AEB$ (Common)

$\angle EDC = \angle EAB$ (Corresponding angle)

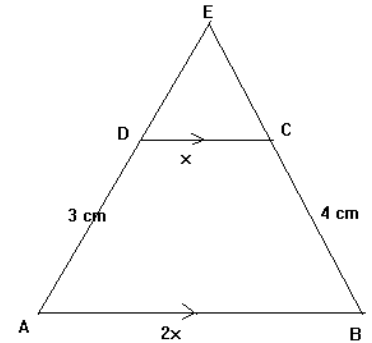
$\Rightarrow \triangle EDC \sim \triangle EAB$ (AA)

$$\Rightarrow \frac{ED}{EA} = \frac{EC}{EB} = \frac{DC}{AB}$$

$$\Rightarrow \frac{ED}{3+DE} = \frac{EC}{EC+4} = \frac{1}{2}$$

$$\Rightarrow DE = 3, EC = 4$$

$$\Rightarrow DE = 3 \text{ cm}, BE = 8 \text{ cm ans.}$$



Now
$$\frac{\text{ar trap } ABCD}{\text{ar } \triangle EDC} = \frac{\text{ar } \triangle ABC - \text{ar } \triangle EDC}{\text{ar } \triangle EDC}$$

$$= \frac{\text{ar } \triangle ABC}{\text{ar } \triangle EDC} - 1$$

$$= \left(\frac{2}{1}\right)^2 - 1$$

$$= 3$$

$$\Rightarrow \text{ar } \triangle EDC : \text{ar trap } ABCD = 1 : 3 \text{ ans.}$$

16. Triangles are similar by SAS theorem

$$\Rightarrow \frac{\text{ar } \Delta_1}{\text{ar } \Delta_2} = \left(\frac{h_1}{h_2}\right)^2 \Rightarrow \frac{7}{16} = \left(\frac{h_1}{h_2}\right)^2 \Rightarrow \frac{h_1}{h_2} = \frac{\sqrt{7}}{4}$$

$$\Rightarrow h_1 : h_2 = \sqrt{7} : 4 \text{ ans.}$$

*** Watch the video for more solutions to the questions from the exercise.

Home Work : Remaining questions from 11 to 20 from the exercise.