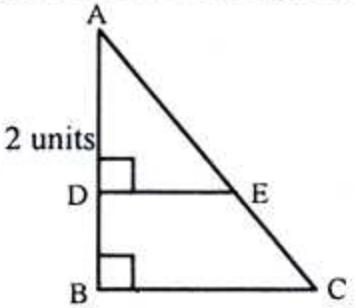
Chapter-15: Area related Theorems and Constructions

Answer to the question no. (300 – 301) according to the following figure:



AD = BD, AE = CE, CE = 2.5 unit

300. BC = what?

ⓐ 3 ⓑ 4
ⓒ 5 ⓓ 6 **a**

301. DE = what?

ⓐ 3 ⓑ 2.5
ⓒ 2 ⓓ 1.5 **d**

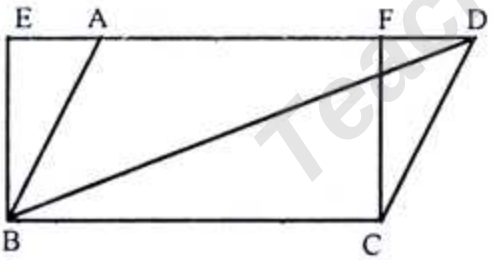
302. What is the area of the region of square when perimeter is 20 metres?

ⓐ 36 ⓑ 25
ⓒ 16 ⓓ 9 **b**

303. The length is twice of the width of a rectangular and perimeter is 60 metres, what will be the width?

ⓐ 5 ⓑ 10
ⓒ 12 ⓓ 20 **b**

304.

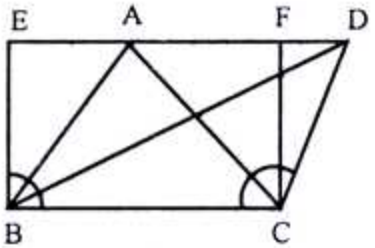


If in the figure, BE ∥ CF, BC ∥ AD and AB ∥ CD—

i. ΔABC = ΔABD
ii. ΔABC = ΔBCD
iii. ΔBCD = ΔACF

Which one of the following is correct?

ⓐ i & ii ⓑ i & iii
ⓒ ii & iii ⓓ i, ii & iii **a**



BC ∥ DE and AB ∥ CD

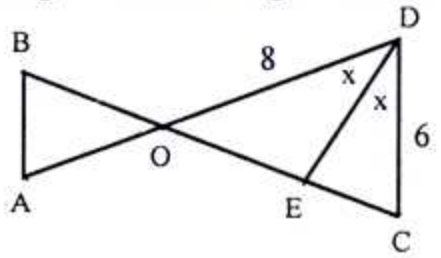
305. In the figure—

i. Δ region ABC = Δ region BDC
ii. Δ region BDC = □ region BCFE
iii. ABCD = □ region BCFE

Which one of the following is correct?

ⓐ i & ii ⓑ i & iii
ⓒ ii & iii ⓓ i, ii & iii **b**

Answer the question no. (306 – 307) according to the following information:



Here, AB ∥ DC

306. Which one is correct?

ⓐ $\frac{OA}{OD}=\frac{OB}{OC}$ ⓑ $\frac{OD}{OB}=\frac{OC}{OA}$
ⓒ $\frac{AB}{CD}=\frac{OD}{OA}$ ⓓ $\frac{OC}{OB}=\frac{AB}{CD}$ **b**

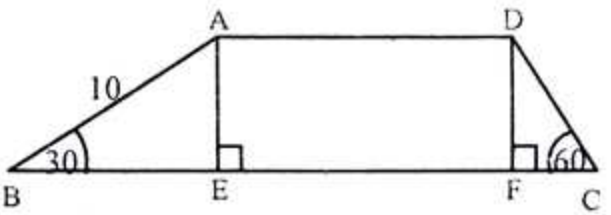
Explain: ΔAOB and ΔCOD is similar.

$\frac{OD}{OB}=\frac{OC}{OA}=\frac{CD}{AB}$

307. CE : OE = what?

ⓐ 1 1 ⓑ x x
ⓒ 3 4 ⓓ 8 6 **c**

Answer to the question no. (308 – 309) according to the following information:



308. What is the value of AE?

ⓐ 5 ⓑ $5\sqrt{2}$
ⓒ $10\sqrt{2}$ ⓓ 20 **a**

309. What is the value of CD?

ⓐ $\frac{\sqrt{3}}{10}$ ⓑ 2.5 ⓒ $\frac{10}{\sqrt{3}}$ ⓓ 10 **c**