

$$\text{area of } \triangle CEB = 84 \text{ cm}^2$$

$$\frac{1}{2} \times BE \times h = 84$$

$$\frac{1}{2} \times 15 \times h = 84$$

$$\Rightarrow h = \frac{84 \times 2}{15}$$

$$= \frac{56}{5} \text{ cm}$$

$$\text{area of trapezium} = \frac{1}{2} (DC + AB) h$$

$$= \frac{1}{2} (10 + 25) \times \frac{56}{5}$$

$$= \frac{1}{2} \times 35 \times \frac{56}{5}$$

$$= 196 \text{ cm}^2$$