













































It can be observed that ABED is a parallelogram.

$$BE = AD = 13 \text{ m}$$

$$ED = AB = 10 \text{ m}$$

$$EC = 25 - ED = 15 \text{ m}$$

For  $\triangle BEC$ ,

$$s = \frac{(13+14+15)\text{m}}{2} = 21 \text{ m}$$

Semi-perimeter,

By Heron's formula,

$$= \sqrt{s(s-a)(s-b)(s-c)}$$

Area of triangle

$$= \left[ \sqrt{21(21-13)(21-14)(21-15)} \right] \text{m}^2$$

Area of  $\triangle BEC$

$$= \left[ \sqrt{21(8)(7)(6)} \right] \text{m}^2 = 84 \text{ m}^2$$

$$= \frac{1}{2} \times CE \times BF$$

Area of  $\triangle BEC$

$$84 \text{ cm}^2 = \frac{1}{2} \times 15 \text{ cm} \times BF$$

$$BF = \left( \frac{168}{15} \right) \text{ cm} = 11.2 \text{ cm}$$

$$\text{Area of ABED} = BF \times DE = 11.2 \times 10 = 112 \text{ m}^2$$

$$\text{Area of the field} = 84 + 112 = 196 \text{ m}^2$$