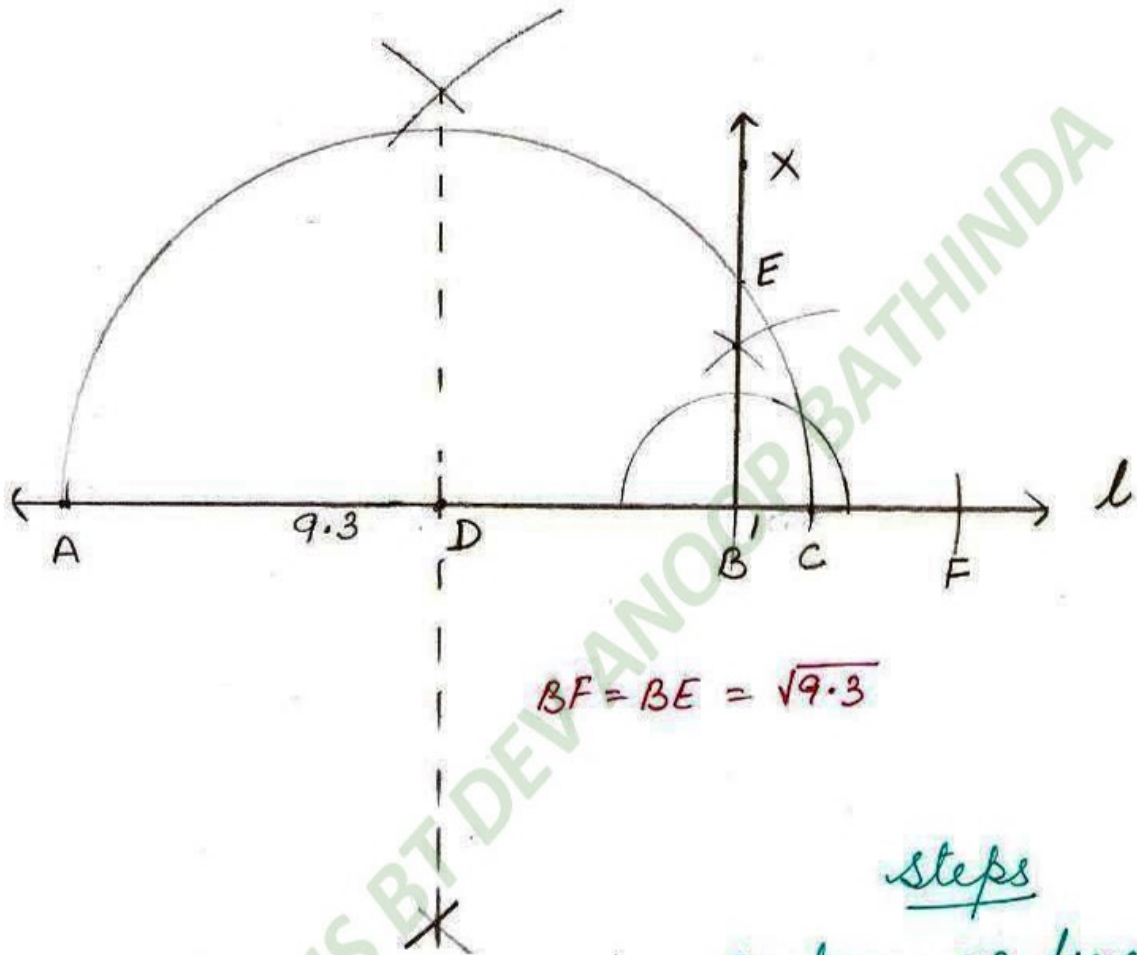


(4)



$$BF = BE = \sqrt{9.3}$$

Proof

$$\begin{aligned} DC &= \frac{1}{2} \times AC \\ &= \frac{1}{2} \times 10.3 \\ &= \frac{10.3}{2} \text{ cm} \end{aligned}$$

$$\therefore \text{radius } DE = \frac{10.3}{2} \text{ cm}$$

$$\begin{aligned} DB &= \frac{10.3}{2} - 1 \\ &= \frac{8.3}{2} \text{ cm} \end{aligned}$$

In rt  $\triangle DBE$ 

$$BE = \sqrt{\left(\frac{10.3}{2}\right)^2 - \left(\frac{8.3}{2}\right)^2}$$

$$= \sqrt{\frac{2}{2} \times \frac{18.6}{2} \times 9.3}$$

$$= \sqrt{9.3}$$

(using  $a^2 - b^2 = (a-b)(a+b)$ )Steps

- ① draw ~~AB~~ line l,  $AB = 9.3 \text{ cm}$ ,  $BC = 1 \text{ cm}$
- ② draw per bis. of AC intersecting it at D
- ③ with centre D and radius = DA or DC draw a semicircle
- ④ draw  $Bx \perp l$  intersecting semi  $\odot$  at E
- ⑤  $BE = \sqrt{9.3}$
- ⑥ draw  $BF = BE = \sqrt{9.3}$