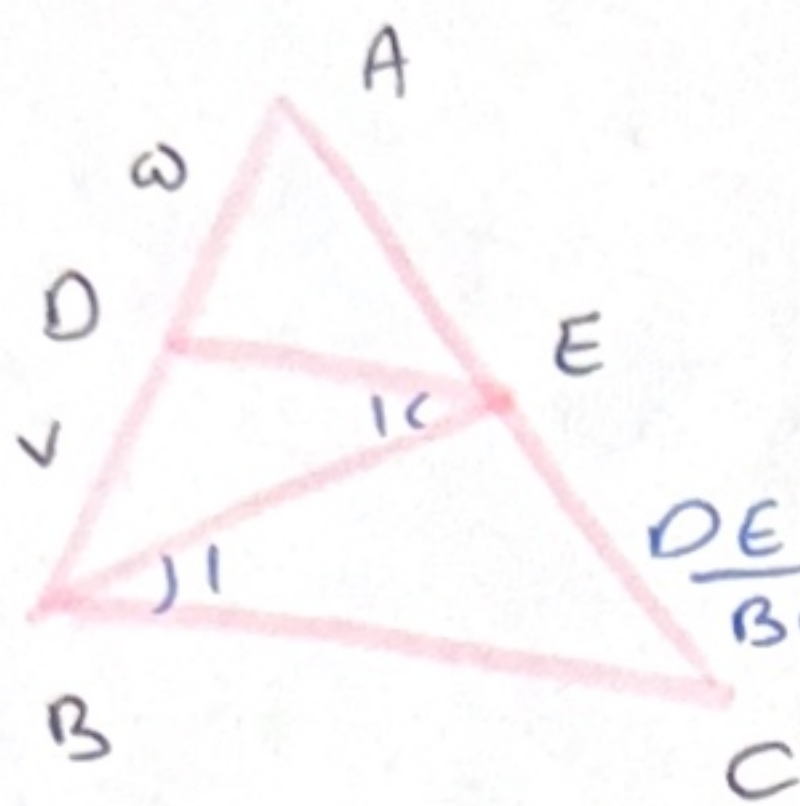


18, 75

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۲۲ ... کلاس یازدهم ریاضی B



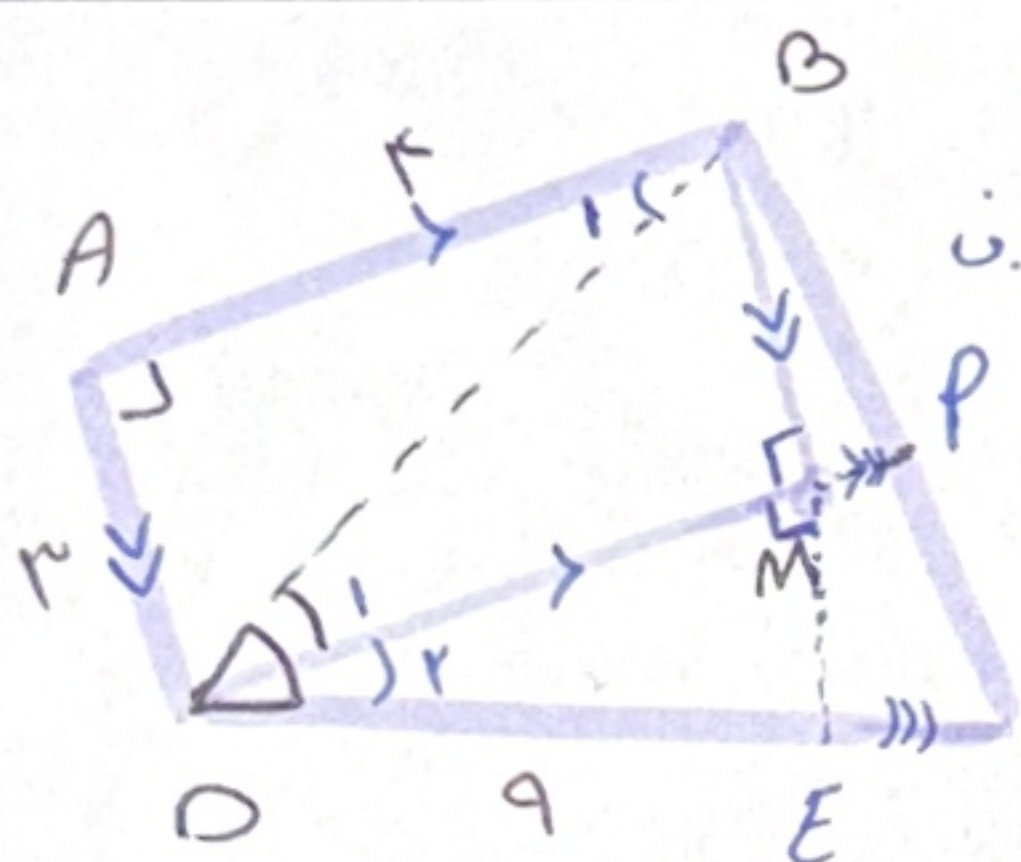
$$DE \parallel BC, BE / \Rightarrow \hat{E}_1 = \hat{B}_1$$

$$OE \parallel BC \xrightarrow{\text{مسا}} \frac{AE}{AC} = \frac{DE}{BC} = \frac{AO}{AB}$$

$$\frac{DE}{BC} = \frac{AE}{AC} = \frac{\omega}{12}$$

$$\frac{S_{BCE}}{S_{BDE}} = \frac{\frac{1}{2} \times BC \times BE \times \sin E}{\frac{1}{2} \times BC \times DE \times \sin B} \Rightarrow \frac{DE}{BC} = \frac{\omega}{12} \Rightarrow \frac{12}{\omega}$$

1, 75



$$AB \parallel DM \Rightarrow \hat{B}_1 = \hat{D}_1$$

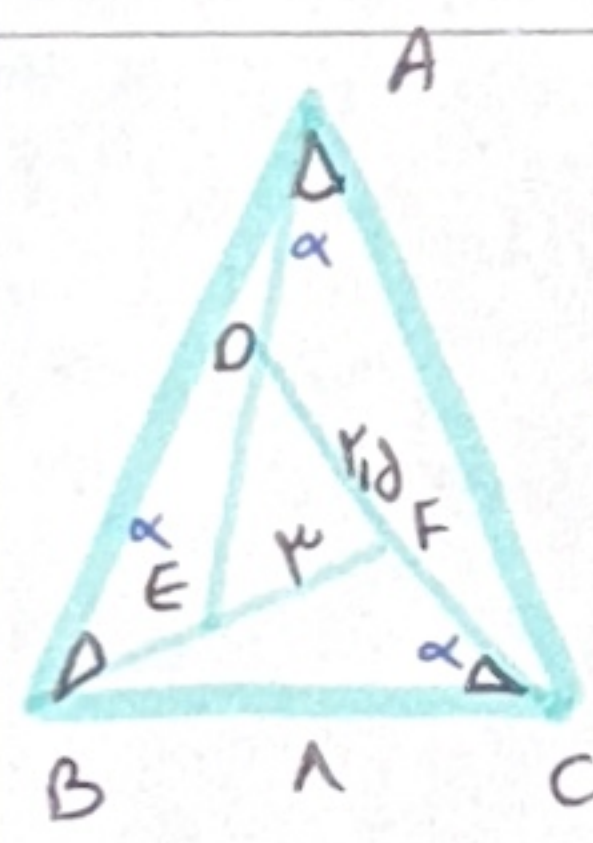
$$\text{و ب } \hat{D}_1 = \hat{D}_1 \Rightarrow \hat{B} + \hat{D}_1 = \hat{D}_1 \Rightarrow \hat{B} = \hat{D}_1$$

$$\hat{A} \hat{O} \hat{B} = \hat{D} \hat{O} \hat{E}$$

$$\hat{A} \hat{O} \hat{D} \cong \hat{B} \hat{O} \hat{E}$$

$$\left. \begin{array}{l} DM \parallel BC \\ \hat{D}_1 = \hat{D}_1 \\ \hat{M} = 90^\circ \end{array} \right\} \Rightarrow \left. \begin{array}{l} \hat{O} \hat{M} \hat{B} \cong \hat{O} \hat{M} \hat{E} \\ \hat{D}_1 = \hat{D}_1 \\ \hat{M} = 90^\circ \end{array} \right\} \Rightarrow \left. \begin{array}{l} DE = \omega \\ CE = 4 \\ ME = BM = 4 \end{array} \right\}$$

$$EC \parallel MP \xrightarrow{\text{مسا}} \frac{MP}{CE} = \frac{BP}{BC} = \frac{BM}{BE} = \frac{1}{2} \Rightarrow MP = \frac{1}{2} \times 4 = 2$$



$$\hat{F} \hat{B} \hat{C} \rightarrow \hat{E} \hat{F} \hat{D} \Rightarrow \hat{E} \hat{F} \hat{D} = \hat{\beta} - \hat{\alpha} + \hat{\alpha} = \hat{\beta}$$

$$\hat{A} \hat{B} \hat{E} \rightarrow \hat{F} \hat{O} \hat{E} \Rightarrow \hat{F} \hat{O} \hat{E} = \hat{A} - \hat{\alpha} + \hat{\alpha} = \hat{A}$$

$$\hat{A} \hat{B} \hat{C} \sim \hat{D} \hat{E} \hat{F} \Rightarrow \frac{12}{12} = \frac{4}{AB} \Rightarrow AB = 4 \times \frac{12}{12} = 4$$



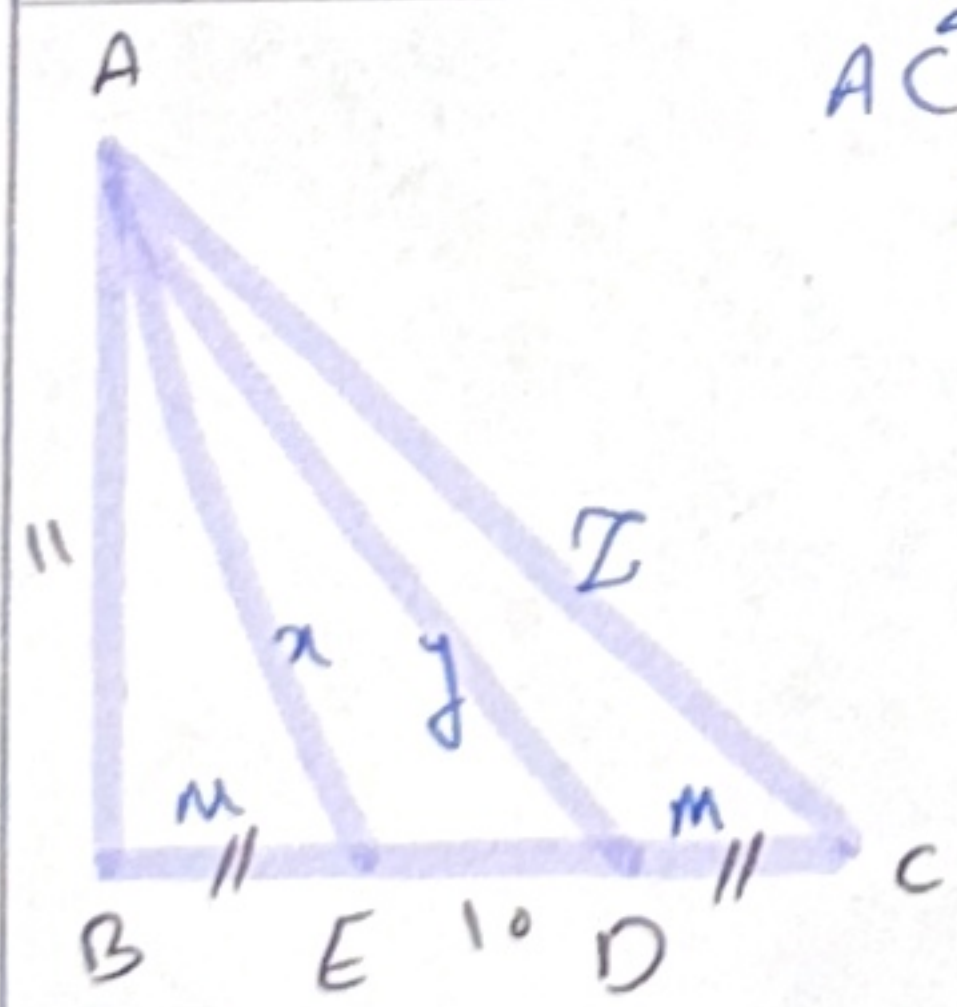
$$MC^2 = 4^2 + 4^2 \Rightarrow MC = \sqrt{40} = 2\sqrt{10}$$

$$DC \parallel AB, CM / \Rightarrow \hat{C}_1 = \hat{M}_1, \hat{E}_1 = \hat{E}_1 \Rightarrow \frac{DC}{MB} = \frac{CE}{ME} = \frac{4}{4} = 1$$

$$CE + ME = 2\sqrt{10} \Rightarrow ME = \sqrt{10}$$

$$\hat{C}_1 = \hat{M}_1 \Rightarrow \hat{C} \hat{B} \hat{M} \sim \hat{M} \hat{A} \hat{F} \Rightarrow \frac{MB}{AF} = \frac{BC}{AM} = \frac{MC}{MF} \Rightarrow \frac{4}{MF} = \frac{4}{4} \Rightarrow MF = 4$$

$$S_{MFE} = \frac{1}{2} \times \sqrt{10} \times \sqrt{10} = 5$$

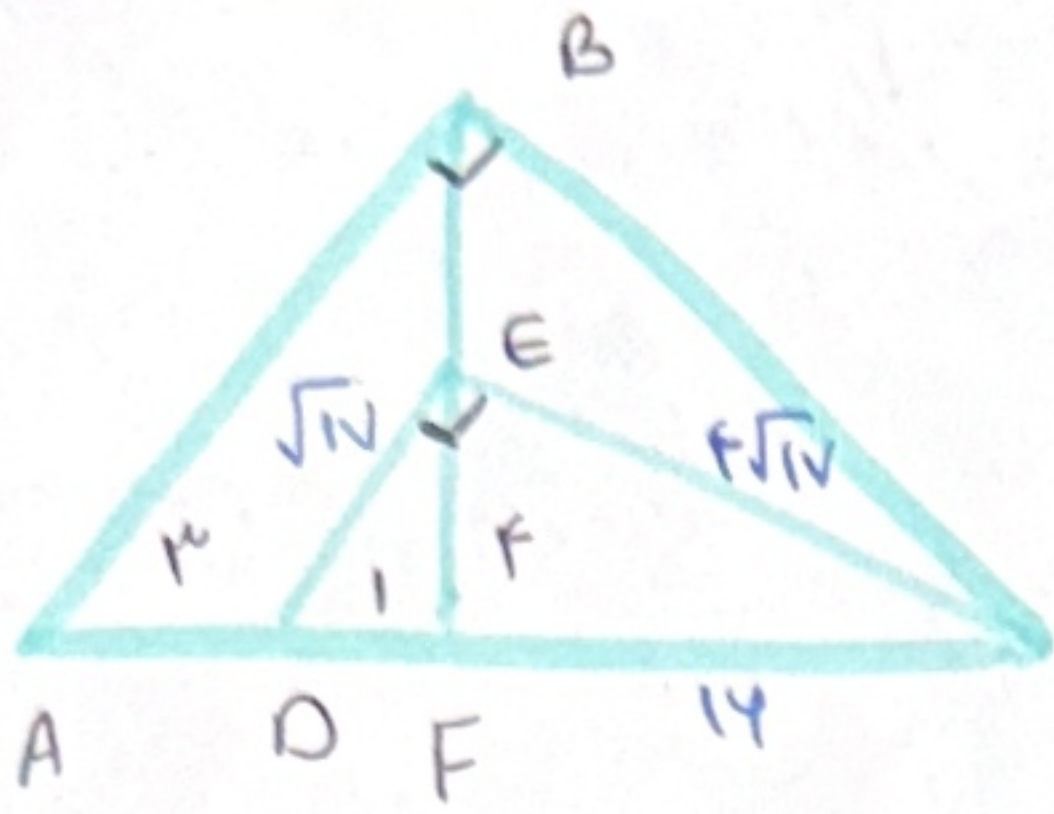


$$\hat{A} \hat{C} \hat{E} \sim \hat{A} \hat{E} \hat{D}$$

$$\frac{x}{1+m} = \frac{y}{2} = \frac{1}{x} \Rightarrow x^2 = 1 \cdot 1 + 1 \cdot m \Rightarrow 1 + 1 \cdot m = 12 + m^2 \Rightarrow m^2 - 1 \cdot m + 11 = 0$$

$$(m-3)(m-4) = 0 \Rightarrow m = 3 \text{ or } m = 4$$

5



$$EF^2 = DF \times FC \Rightarrow F^2 = 1 \times FC \Rightarrow FC = 14$$

$$ED^2 = DF \times DC \Rightarrow ED^2 = 1 \times (14+1) \Rightarrow ED = \sqrt{15}$$

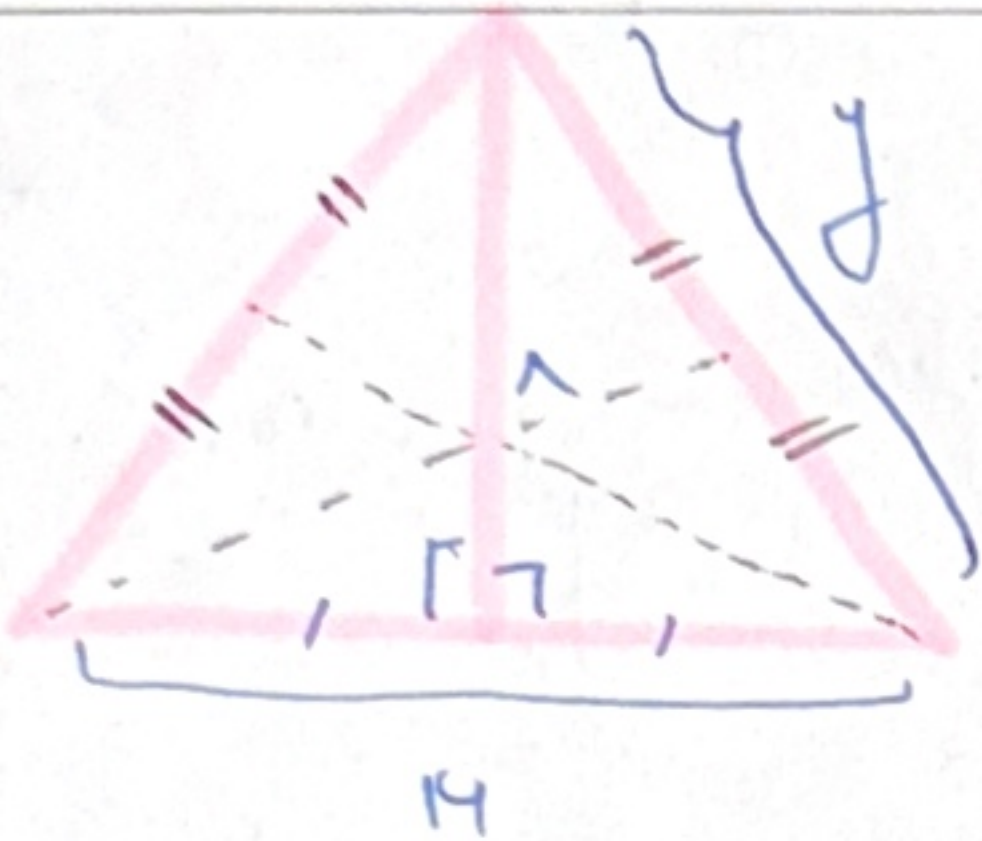
$$EC^2 = FC \times DC \Rightarrow 14 \times 15 \Rightarrow EC = F\sqrt{15}$$

$$BF^2 = AF \times FC \Rightarrow BF^2 = F \times 14 \Rightarrow BF = 14$$

$$BC^2 = BF^2 + FC^2 \Rightarrow 14^2 + 14^2 \Rightarrow BC = 14\sqrt{2}$$

5

6



$$14^2 + 14^2 = y^2 \Rightarrow y = \sqrt{4F + 4F} = \sqrt{F \times 4F} = 14\sqrt{2}$$

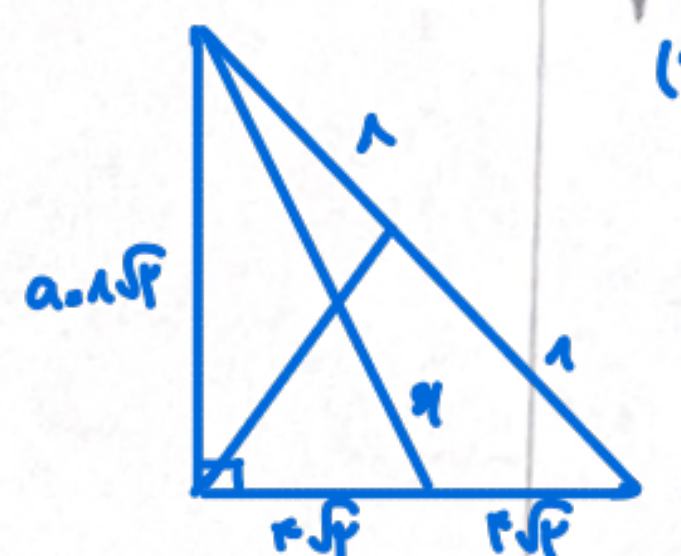
$$\frac{y}{F} = \sqrt{2}$$

$$a^2 + a^2 = 14^2 \Rightarrow a = 14\sqrt{2}$$

$$x^2 = (14F)^2 + (F\sqrt{2})^2 \Rightarrow x = F\sqrt{10}$$

1

14



$$BC^2 = F^2 + F^2 \Rightarrow BC = \sqrt{F^2 + F^2} = F\sqrt{2}$$

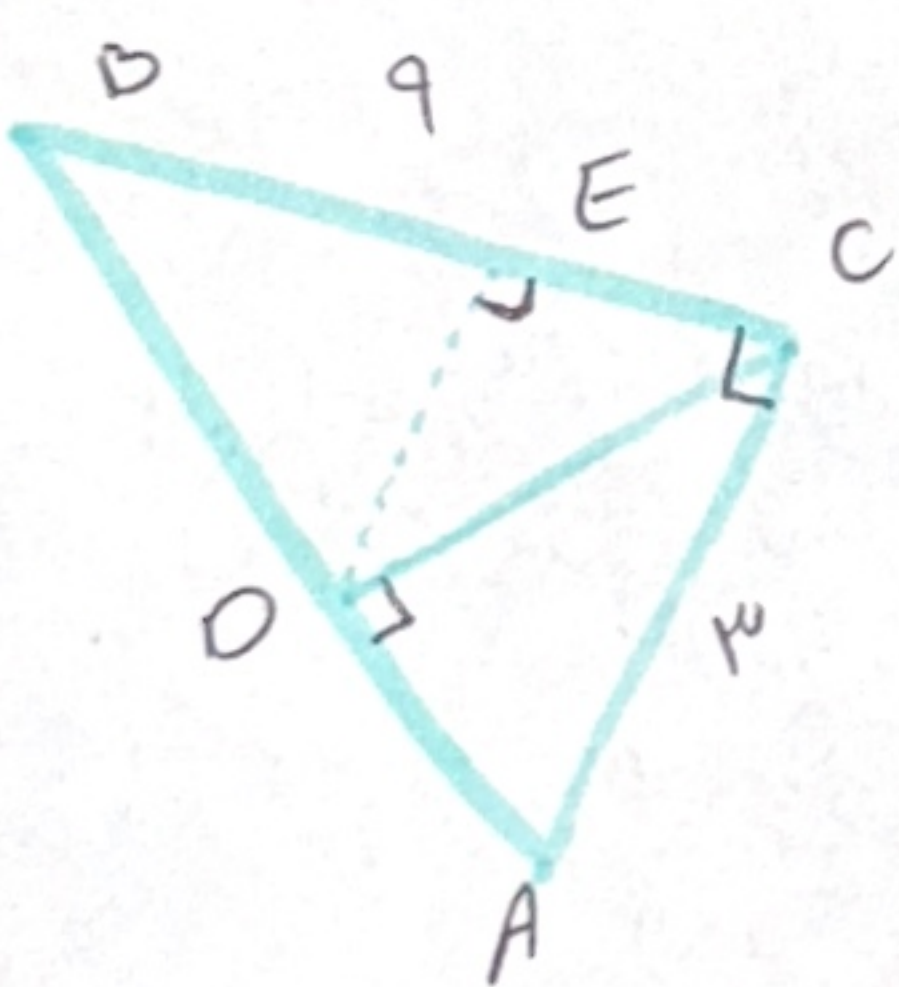
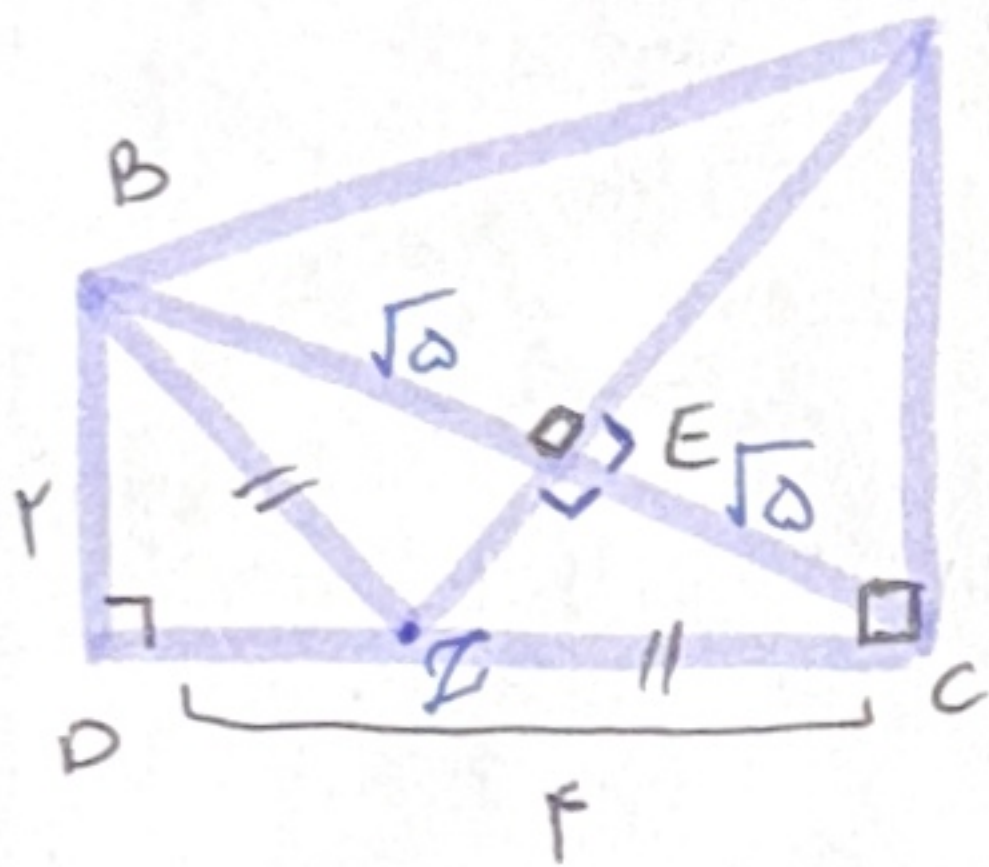
$$ZE \rightarrow \text{موازيات} \Rightarrow BE = EC \Rightarrow EC = \sqrt{5}$$

$$\frac{F}{\sqrt{5}} = \frac{F}{AE} \Rightarrow AE = F\sqrt{5}$$

$$S_{ABE} \Rightarrow \frac{AE \times BE}{F} \Rightarrow \frac{F\sqrt{5} \times \sqrt{5}}{F} = 5$$

5

14



BE ?

$$AB^2 = 11^2 + 9^2 = \sqrt{90} = 3\sqrt{10}$$

$$BC^2 = BD \times AB \Rightarrow 11 = BD \times 3\sqrt{10} \Rightarrow BD = \frac{11}{3\sqrt{10}} = \frac{11\sqrt{10}}{30}$$

$$BD^2 = BE \times BC \Rightarrow \left(\frac{11\sqrt{10}}{30}\right)^2 = BE \times 9 \Rightarrow \frac{11 \times 11 \times 10}{10 \times 9} \times \frac{1}{9} = BE$$

$$BE = 11$$

9

$$AC = \sqrt{14^2 + 14^2} \Rightarrow AC = 14$$

$$AB^2 = AH \times AC \Rightarrow 14^2 = AH \times 14 \Rightarrow AH = \frac{14 \times 14}{14} = 14 \Rightarrow AE = \frac{14 \times 14}{14} = 14$$

$$DE \parallel BC \Rightarrow \frac{DE}{BC} = \frac{AE}{AC} \Rightarrow \frac{DE}{14} = \frac{14}{14} \Rightarrow DE = 14 \times \frac{14}{14} \times \frac{1}{14} \Rightarrow DE = \frac{14}{14}$$

1

