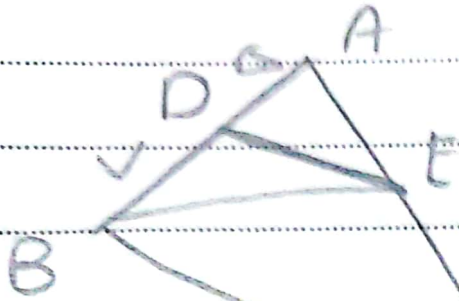


دربارهٔ ضلع

(پایهٔ هفتم دفتر A)

تاثیر ضلع

①

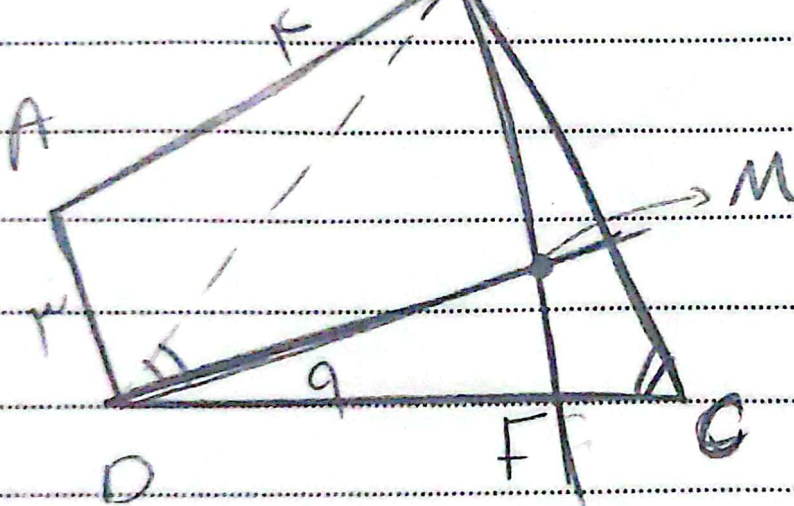


BEC, DBE

در مثل هم ارتفاع
نسبت مساحت ها برابر است با

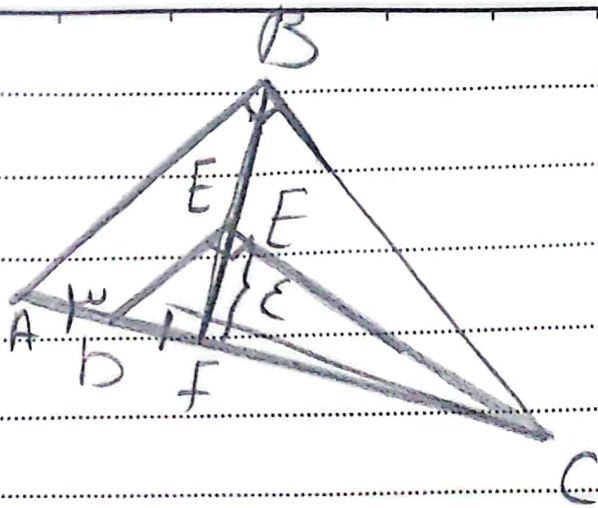
$$\frac{S_{BCE}}{S_{BDE}} = \frac{BC}{DE} = \frac{2}{12}$$

5

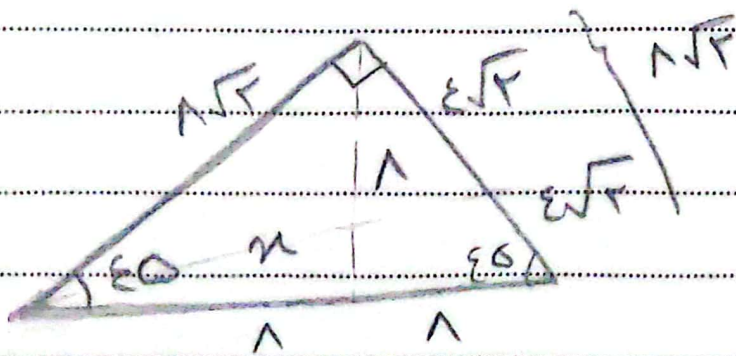


②

5



9

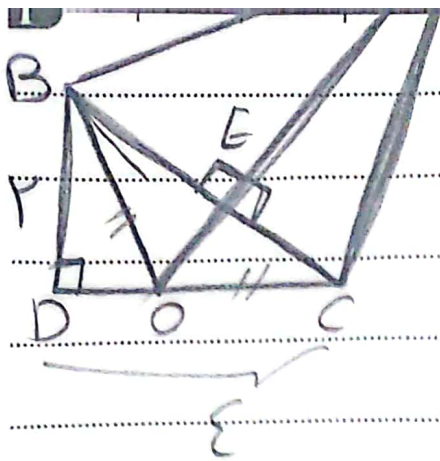


✓

5

$$(12)^2 + (5)^2 = 13^2 \rightarrow 144 + 25 = 169$$

$$12 = 5\sqrt{10}$$



$$BC = \sqrt{10}$$

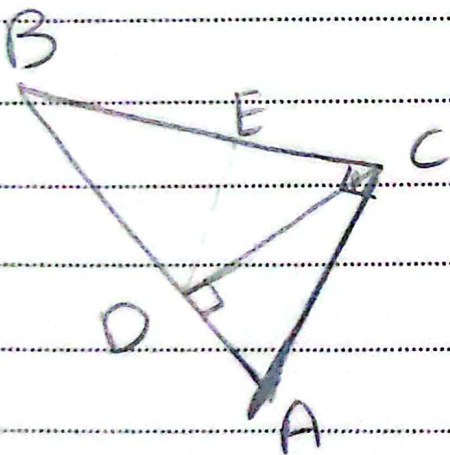
(A)

$$BE = \frac{\sqrt{10}}{2}$$

متساوية الساقين
BOC

0,8

4



(9)

$$CD = \frac{9\sqrt{10}}{10}$$

$$AC' + BC' = AB'$$

$$9 + 11 \quad AB = \sqrt{10}$$

$$AC \times BC = AB \times CD$$

$$9 \times 11 = \sqrt{10} \times CD$$

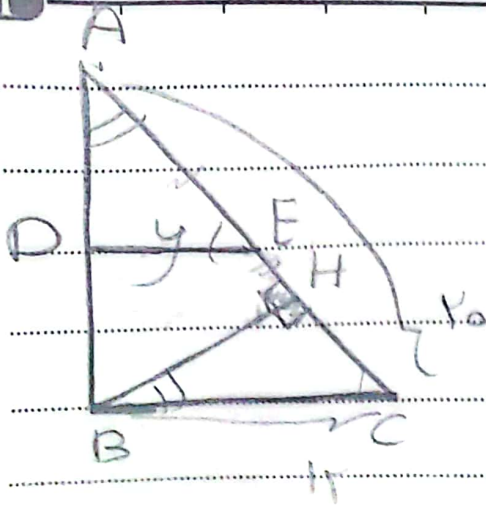
$$CD' = CE \times BC$$

$$\frac{11 \times 9}{10} = 9 \times CE \quad CE = 0,9$$

$$BE = BC - CE = 9 - 0,9 = 8,1$$

PARAMOUNT

$$DE = (\epsilon_0 \sqrt{r} - \epsilon_0) \times \mu$$



$$\frac{DE}{BH} = \frac{r}{r_0}$$

$$r \cdot r = \alpha y$$

$$\frac{r}{\alpha} = y$$

$$\triangle ADE \sim \triangle BHC$$

$$\frac{CH}{y} = \frac{BH}{AD} = \frac{r}{r}$$

$$r(r_0 - r) = r y$$

$$r(r_0 - r) = r \alpha \frac{r}{\alpha}$$

$$r \epsilon_0 - r \epsilon = \frac{r}{\alpha} r$$

~~data~~

$$r \epsilon_0 - r \epsilon = \frac{r}{\alpha} r$$

$$r \epsilon_0 - r \epsilon = \frac{r}{\alpha} r$$

$$\epsilon_0 - \epsilon = \frac{r}{\alpha}$$

$$\Delta = 1400 - \epsilon_0 - \epsilon = 1400 - \epsilon_0 - \epsilon$$

$$\frac{-\epsilon_0 \pm \sqrt{\epsilon_0^2 + 4 \times 1400}}{2} = \frac{-\epsilon_0 \pm 10 \sqrt{\epsilon_0}}{2}$$

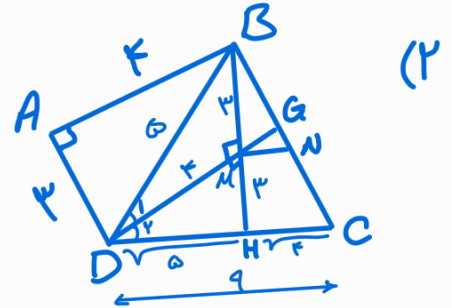
PARAMOUNT

$$r(-\epsilon_0 \pm \epsilon_0 \sqrt{r})$$

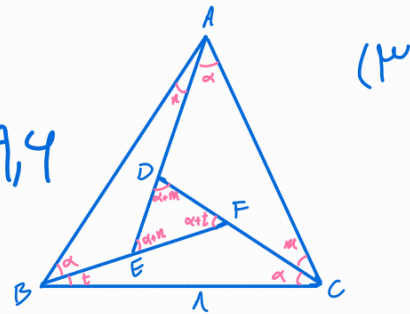
$$\frac{AD}{AB} = \frac{DE}{BC} = \frac{6}{14} \quad (1)$$

$$\frac{S_{BCE}}{S_{BDE}} = \frac{BC}{DE} = \frac{14}{6} = 7, \bar{4}$$

$\hat{D}_1 = \hat{D}_2 \leftarrow DMH$, BDM هم‌انشت هستند
 در مثلث BMC با نسبت ۲ به‌شکل هندسی HN و HC است
 بنابراین فاصله M از وسط قطع BC برابر ۲ است



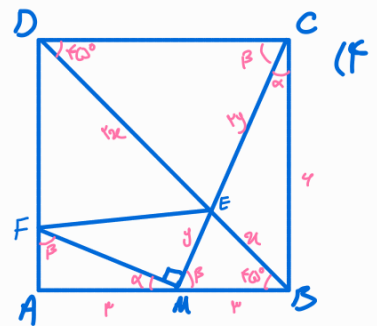
$$\triangle ABC \sim \triangle DEF \rightarrow \left. \begin{array}{l} F = B \\ D = C \\ A = E \end{array} \right\} \rightarrow \frac{AB}{14} = \frac{1}{2,5} \rightarrow AB = 9,4$$



$$MC^2 = 4^2 + 3^2 \rightarrow MC = 5\sqrt{2}$$

$$\tan F = \frac{4}{AF} = \tan M = \frac{BC}{MB} = 2 \rightarrow AF = \frac{4}{2}$$

$$FM^2 = AF^2 + AM^2 \rightarrow MF = \frac{5\sqrt{2}}{2}$$

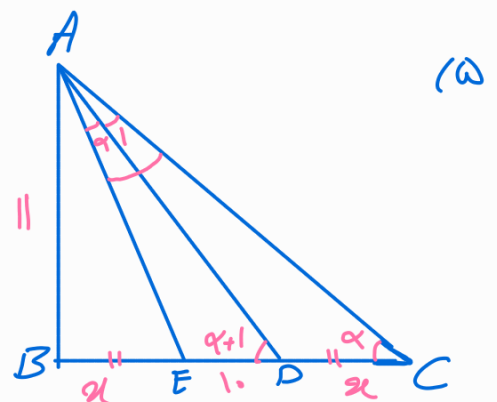


$$DEC, MEB \text{ در مثلث } = \frac{4}{2} = 2 \rightarrow 3y = 5\sqrt{2} \rightarrow y = \sqrt{2}$$

$$S_{FME} = \frac{1}{2} ME \times MF = \frac{10}{2}$$

$$\triangle CAE \sim \triangle AED \rightarrow \left. \begin{array}{l} \alpha = \alpha \\ \alpha + 1 = \alpha + 1 \\ \hat{E} = \hat{E} \end{array} \right\} \rightarrow \frac{AE}{ED} = \frac{EC}{AE}$$

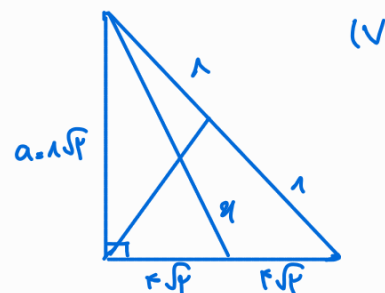
$$\frac{\sqrt{2^2 + 14^2}}{10} = \frac{2 + 10}{\sqrt{2^2 + 14^2}} \rightarrow 2 = 10 \angle 7$$



$$EF^r = DF \times FC \rightarrow FC = 14 \quad BC^r = FC \times AC \rightarrow BC = 1\sqrt{10} \quad (4)$$

$$a^r + a^r = 14^r \rightarrow a = 1\sqrt{7}$$

$$21^r = (1\sqrt{7})^r + (1\sqrt{7})^r \rightarrow 21 = 1\sqrt{10}$$

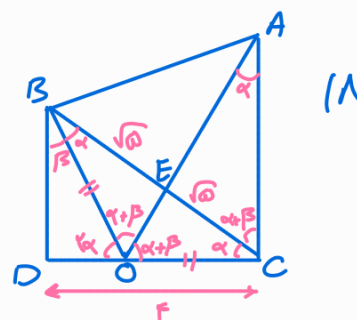


$$\gamma\alpha + \beta = 90^\circ$$

$$BD^r + DC^r = BC^r \rightarrow BC = 1\sqrt{10} = 1BE = 1EC \rightarrow BE = EC = \sqrt{10}$$

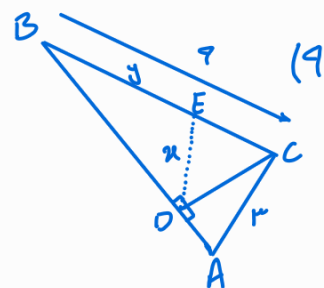
$$\frac{1}{\sqrt{10}} = \frac{1}{AE} = \frac{1\sqrt{10}}{10} \rightarrow AE = 1\sqrt{10}$$

$$S_{ABE} = \frac{1}{2} AE \times BE = 10$$



$$\frac{x}{1} = \frac{y}{1} \rightarrow y = 1x$$

$$x^r = y(1-y) = 1x(1-1x) \rightarrow x = 1,1, y = 1,1$$



$$AB^r + BC^r = AC^r \rightarrow AC = 10$$

$$\triangle ADE \sim \triangle ABH \rightarrow \begin{cases} \hat{A} = \hat{A} \\ \hat{D} = \hat{H} = 90^\circ \end{cases} \rightarrow \frac{DE}{BH} = \frac{AE}{14} \quad (1)$$

$$S_{ABC} = \frac{AB \times BC}{2} = \frac{BH \times AC}{2} \rightarrow BH = 9,4$$

$$\triangle ABC \rightarrow 14^r = AH \times 10 \rightarrow AH = 1,1 \rightarrow AE = \frac{AH}{1} = 1,1$$

$$\textcircled{1} \rightarrow \frac{DE}{BH} = \frac{AE}{14} = \frac{DE}{9,4} = \frac{1,1}{14} \rightarrow DE = 1,1$$

