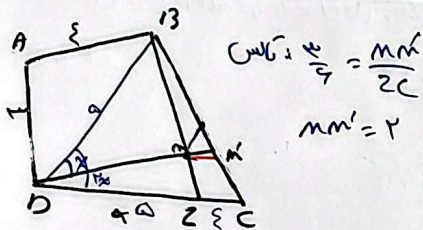


$$DE \parallel BC \rightarrow E_1 = B_1$$

$$\Rightarrow \triangle DEB \sim \triangle BEC$$

$$\frac{AD}{DB} = \frac{AE}{EC} = \frac{5}{12}$$

$$\frac{AD}{AB} = \frac{DE}{BC} \rightarrow \frac{5}{17} \rightarrow S = K^2 = \frac{25}{144} \quad \frac{S_{BEC}}{S_{BED}} = \frac{144}{25}$$



$$\cos \alpha = \frac{5}{17} \rightarrow \sin \alpha = \frac{12}{17}$$

$$\cos \alpha = \frac{5}{17} \rightarrow \sin \alpha = \frac{12}{17}$$

$$\frac{DF}{EF} = \frac{BD}{CE} = \frac{5}{12} \quad \frac{EF}{DF} = \frac{CE}{BD} \quad / \quad BD = 5k \quad CE = 12k$$

$$5k + 12k = 17k$$

$$k = \frac{17}{11}$$

$$BD = 5k = 5 \times \frac{17}{11} = \frac{85}{11}$$

$$CE = 12k = 12 \times \frac{17}{11} = \frac{204}{11}$$

$$BD + CE = BC = 17$$

$$\frac{AB}{BD} = \frac{AE}{EF} = \frac{17}{5} \quad AB = BD \times \frac{17}{5} = \frac{100}{11}$$

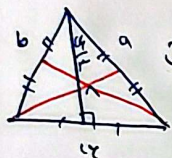
$$AB = BC = CD = DA = 17 \quad ME = AM = 5 \quad FM = AM = 5$$

$$AM = MB = 5 \quad AM = \frac{AB}{2} = 5 = \frac{17}{2}$$

$$S_{FMG} = \frac{1}{2} \times 5 \times 5 = \frac{25}{2}$$

$$AF = AD + DF = 4 + 1 = 5 \quad \frac{DE}{BF} = \frac{CE}{AC} \quad BF = \frac{AC \times BC}{AB}$$

6



$$\text{مساحت} = \sqrt{1^2 + 4^2} = \sqrt{17} \approx 4.123$$

$$\text{مساحت} = \frac{1}{2} \sqrt{1^2 + 4^2} = \frac{1}{2} \sqrt{17} \quad a = 1\sqrt{17} \quad b = 4\sqrt{17}$$

$$= \frac{1}{2} \sqrt{2(1\sqrt{17})^2 + 2(4\sqrt{17})^2} \rightarrow \frac{1}{2} \sqrt{50} = \frac{1}{2} \times 5\sqrt{10} = 2.5\sqrt{10}$$

هزینه دارد بر مبنای تقاطع و ترانس
مکثرتی در هر هزینه قرار دارد (اصل به خودی که به سبب
به انقسام می باشد

7

$$OB = OC = x$$

$$BD^2 + DO^2 = x^2 \rightarrow (2 + x)^2 + 2 = x^2 \quad \begin{cases} 14 + x^2 - 4x + 2 = x^2 \\ 16x = 2, \quad x = \frac{2}{16} \end{cases}$$

$$BC = \sqrt{2 + 14} = \sqrt{16} \quad BE = EC = \sqrt{6} \quad 16^2 + 0.6^2 = \frac{25}{14}$$

8

$$BA = \sqrt{9} = 3\sqrt{10}$$

$$\frac{BD}{\sqrt{10}} = \frac{DE}{3}$$

$$BD = BE \cdot \frac{10}{3}$$

$$BD^2 = DE^2 + BE^2$$

$$BD = \sqrt{10} DE$$

$$\frac{BD}{\sqrt{10}} = \frac{BE}{3}$$

$$DE = \frac{BE}{3}$$

$$\left(\frac{BE\sqrt{10}}{3}\right)^2 = \left(\frac{BE}{3}\right)^2 + BE^2$$

$$\frac{10BE^2}{9} = \frac{BE^2}{9} + BE^2$$

9

$$AC = \sqrt{17^2 + 11^2} = \sqrt{340} = 10\sqrt{34}$$

$$AH = \frac{AB^2}{AC} \rightarrow AH = \frac{17^2}{10\sqrt{34}} = \frac{289}{10\sqrt{34}} = \frac{17\sqrt{34}}{10}$$

$$AE = \frac{AE}{F} = \frac{1}{F} \times \frac{17}{10} = \frac{17}{10}$$

$$\triangle ABC \sim \triangle ADE \Rightarrow \frac{AE}{AC} = \frac{17}{10} \times \frac{1}{10} = \frac{17}{100}$$

$$\frac{DE}{17} = \frac{1}{10} \quad DE = \frac{17}{10}$$

10