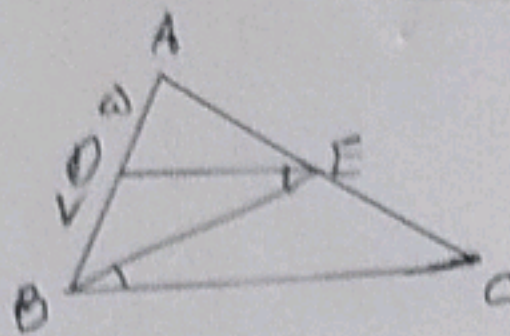
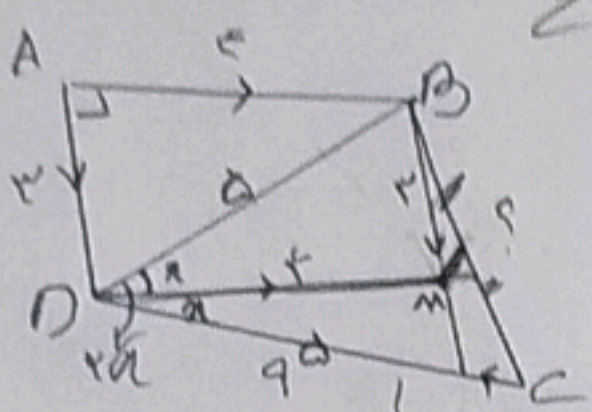


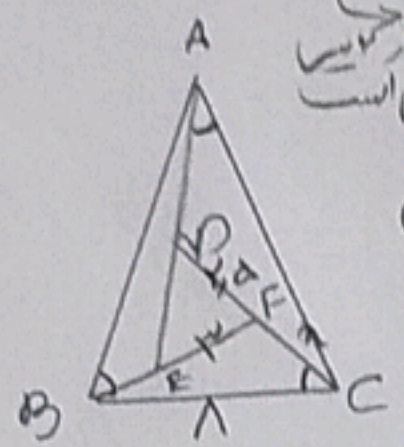


$\frac{S_{BCE}}{S_{BDE}} = \frac{BE \times BC \times \frac{1}{2} \times \sin B}{DE \times BE \times \frac{1}{2} \times \sin E} = \frac{BC}{DE} \times \left\{ \frac{AD}{AB} = \frac{DE}{BC} = \frac{5}{14} \Rightarrow \frac{14}{5} \right\}$   
 زوایا  $\Rightarrow \hat{E} = \hat{B}$

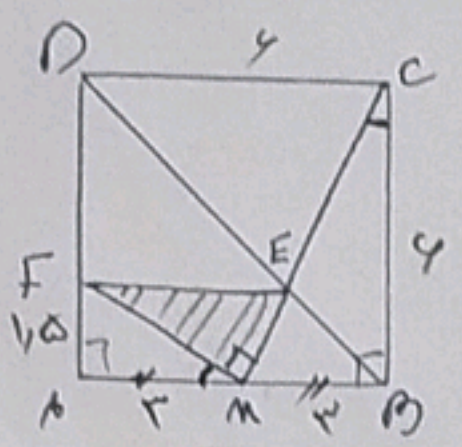


$\frac{a}{2a} = \frac{m}{e} \quad (2)$

9

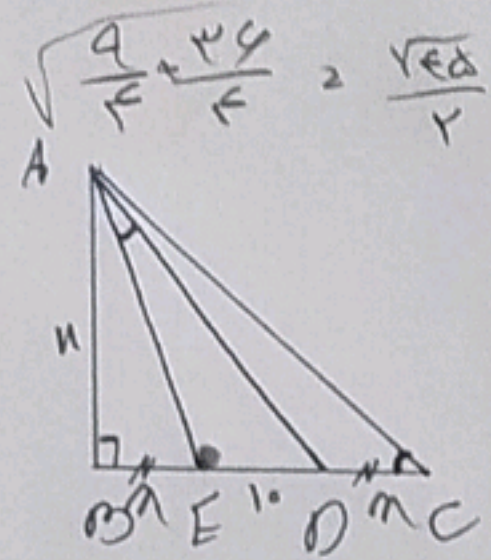


B - a x a =  $\hat{B}$    
 A - a x a =  $\hat{A}$    
 C - a x a =  $\hat{C}$    
 DF = EF =  $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$



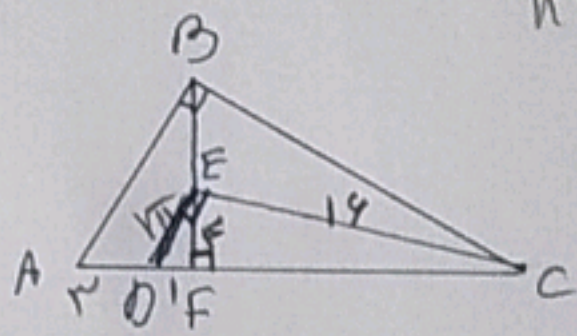
$\frac{BC}{AM} = \frac{CM}{FM} = \frac{MB}{AF} = \frac{6}{3} = \frac{2}{1.5} \Rightarrow MC = \sqrt{3 \times 9} = 3\sqrt{3}$   
 $\sqrt{\left(\frac{3}{2}\right)^2 + 9} = FM$

$\frac{DC}{MB} = \frac{CE}{EM} = \frac{6}{3} = \frac{CE}{EM} = 2$   
 $EM = \sqrt{8} = \frac{CE}{MC} = \frac{2}{3}$

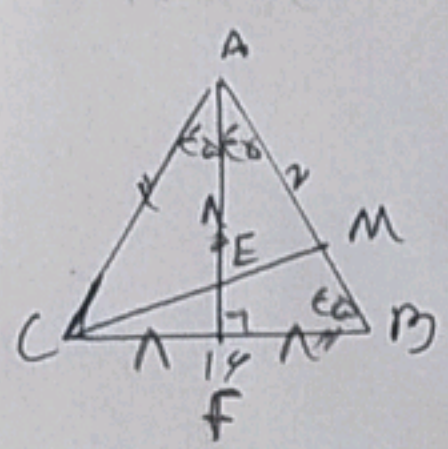


$\frac{AE}{10} = \frac{EC}{AE} = \frac{AC}{AD}$   
 $\frac{AE^2}{10} = 10(10 + a) \Rightarrow a^2 - 10a - 100 = 0$   
 $(a - 5)(a - 15) = 0 \Rightarrow a = 15$

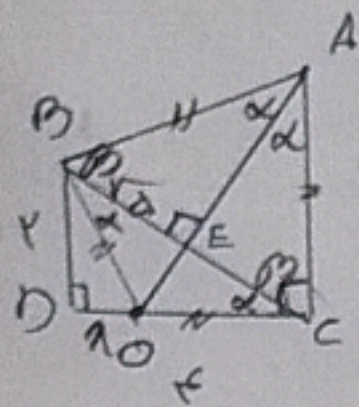
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$E^2 = 1 \times FC = 16$   
 $FC = 16$   
 $FC \times (FC + F) = BC^2 \Rightarrow \sqrt{16 \times 4} = 8$



$CM = 1 \times \frac{1}{3} = \frac{1}{3} = EF$   
 $\frac{CE}{CM} = \frac{1}{3} \Rightarrow \sqrt{\left(\frac{1}{3}\right)^2 + 1^2} = CE \Rightarrow \frac{1}{3} = \frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$   
 $\sqrt{\frac{9}{9} + \frac{9}{9}} = \frac{\sqrt{9+9}}{3} = \frac{1\sqrt{2}}{3} \times \frac{1}{3} = \frac{1}{9}$

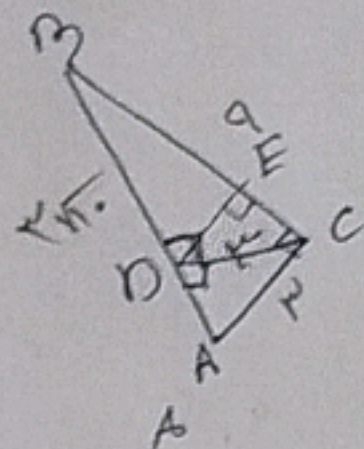


$$S_{ABE} = \frac{1}{2} \cdot \sqrt{2} \cdot y = \frac{\sqrt{2}}{2} y$$

$$\frac{CD}{BC} = \cos \alpha = \frac{x}{\sqrt{2}} = \frac{y}{\sqrt{2}}$$

$$\frac{BE}{AE} = \tan \alpha = \frac{1}{x} \Rightarrow \frac{\sqrt{2}}{x\sqrt{2}}$$

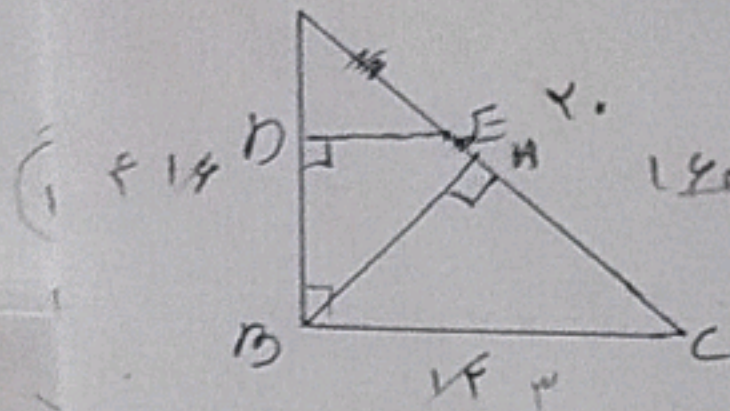
$$\frac{\sqrt{2} \times \sqrt{2}}{x} = \sqrt{2}$$



$$\tan \alpha = \frac{1}{x} \cos \alpha = \frac{y}{\sqrt{2}}$$

$$DE = BC \times \frac{BD}{BC} \times \frac{BE}{BD} \Rightarrow a \times \left( \frac{y}{\sqrt{2}} \right) \Rightarrow \sqrt{2}$$

$$\Rightarrow a \times \left( \frac{y}{\sqrt{2}} \right) \Rightarrow \sqrt{2}$$



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

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

$$\frac{AE}{AB} = \frac{DE}{BH} = \frac{xy}{1} \Rightarrow \frac{y}{1} = \frac{DE}{\frac{1}{x}} \Rightarrow DE = xy$$

$$\Rightarrow DE = xy$$