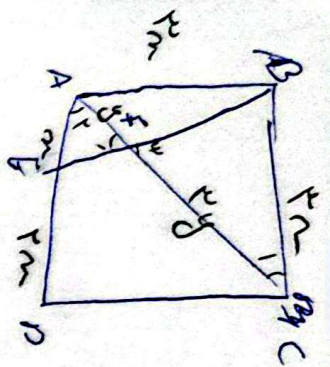
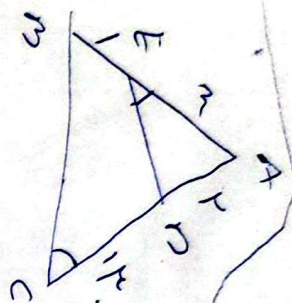


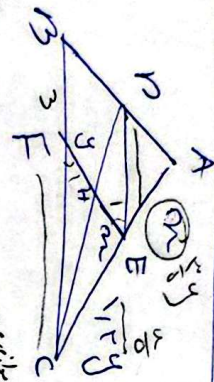


$ED = 1 - AE$ $BE = \sqrt{a^2 + m^2} = \sqrt{1 + m^2}$
 $\Rightarrow EF = \frac{1}{\sqrt{1+m^2}}$
 $\frac{EF}{AF} = ?$ $\frac{1}{\sqrt{1+m^2}} = \frac{1}{\sqrt{1+m^2}}$
 $\frac{BF}{FC} = \frac{y}{1-y}$ $\frac{1}{\sqrt{1+m^2}} = \frac{1}{\sqrt{1+m^2}}$
 $BF \parallel AD, AC \rightarrow AF = CF$
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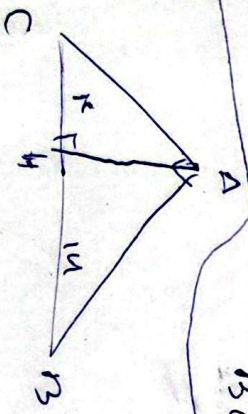
$\frac{BC}{AE} = \frac{1}{x}$
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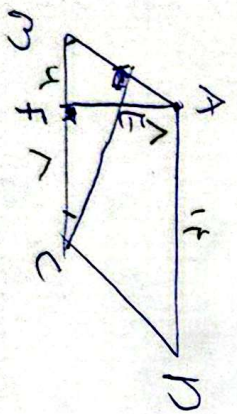
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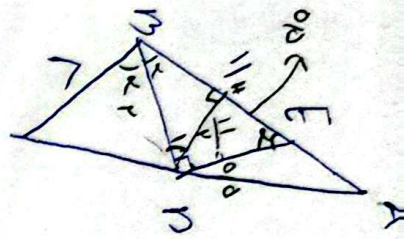
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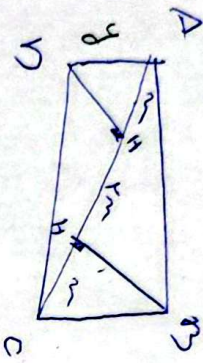
$\frac{BC}{AE} = \frac{1}{x}$
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 $\frac{BC}{AE} = \frac{1}{x}$



$\therefore \triangle BDE$
 $\triangle BDE \sim \triangle BAC$
 $\therefore AE \parallel BC$

$$\frac{AE}{AC} = \frac{AD}{AB} \Rightarrow AE = AD$$

$AD \parallel BC \Rightarrow \angle D = \angle C$
 $\therefore \triangle BDE \sim \triangle BAC$
 $\Rightarrow \angle BDE = \angle BAC$

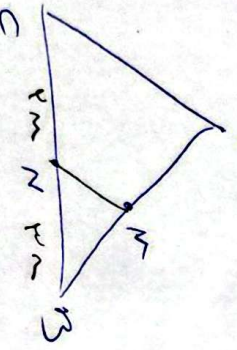


$$\frac{S_{ABC}}{S_{BDC}} = \frac{AE}{EC}$$

$AD \parallel BC \Rightarrow \angle D = \angle C$
 $\therefore \triangle BDE \sim \triangle BAC$
 $\Rightarrow \angle BDE = \angle BAC$

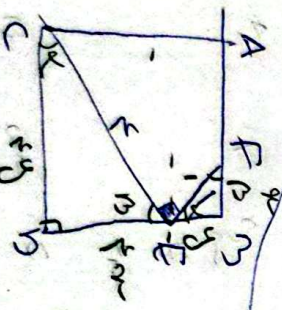
$$\frac{AE}{AC} = \frac{AD}{AB} \Rightarrow AE = AD$$

$$\frac{S_{ABC}}{S_{BDC}} = \frac{AE}{EC}$$



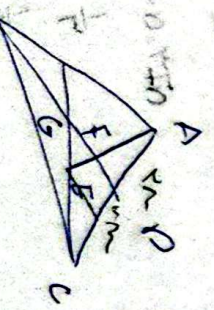
$$\frac{S_{ABC}}{S_{BDC}} = \frac{AE}{EC}$$

$$\frac{AE}{AC} = \frac{AD}{AB} \Rightarrow AE = AD$$



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