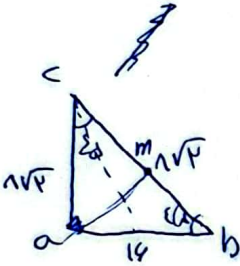


$$ED^2 = DE \times DC \rightarrow EC = 14$$

$$\triangle ABC \sim \triangle BAF \rightarrow \frac{FA}{AB} = \frac{AB}{AC} = \frac{FB}{BC} \rightarrow AB = \sqrt{10}$$

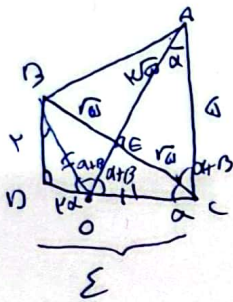
$$AB^2 + BC^2 = AC^2$$

$$10 + BC^2 = 50 \rightarrow BC = \sqrt{40}$$



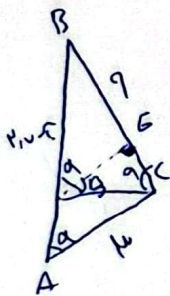
$$mb^2 + mcl^2 = d mcl^2$$

$$mb^2 = 2 \times 1^2 \rightarrow mb = \sqrt{20} = 2\sqrt{5}$$



$$BC = \sqrt{10} = \sqrt{10} \rightarrow \triangle BGC = \triangle EC \rightarrow EC = BE = \sqrt{10}$$

$$\frac{1}{\sqrt{10}} = \frac{2}{AE} \rightarrow AE = 2\sqrt{10} \quad S_{ABCE} = \frac{AE \times EC}{2} = 10$$



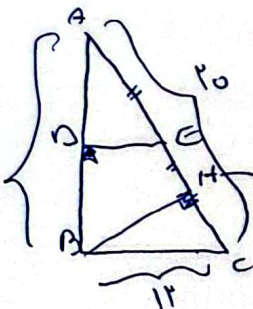
$$\triangle ABC: 11 \quad 11\sqrt{10} \quad 9$$

$$\triangle BCD: CD \quad 9 \quad BD$$

$$\triangle BDE: DE \quad BD \quad BE$$

$$\rightarrow BD = \frac{11}{11\sqrt{10}} \Rightarrow BD = \frac{11}{11\sqrt{10}} = \frac{1}{\sqrt{10}}$$

$$BD = 11$$



$$AC = 20$$

$$\triangle ADE \sim \triangle ABH \rightarrow \frac{DE}{BH} = \frac{AE}{14}$$

$$S = \frac{14 \times 14}{2} = \frac{BH \times 14}{2} \rightarrow BH = 9.8$$

$$14^2 = AH \times 20 \rightarrow AH = 9.8$$

$$DE = \frac{9.8 \times 9.8}{14} = 6.58$$