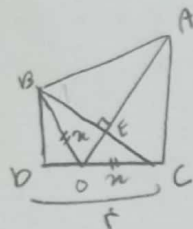


$$AB^2 = BD^2 + AD^2 \Rightarrow x^2 = 1^2 + 2^2 \Rightarrow x = \sqrt{5}$$

$$HD^2 = x^2 \Rightarrow 1^2 = x^2 \Rightarrow HD = \sqrt{5}$$

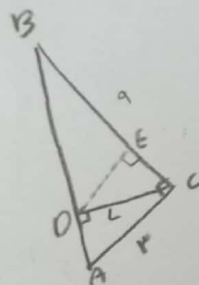
⑦



$$BO^2 = OD^2 + DB^2 \Rightarrow x^2 = 1^2 + 2^2 \Rightarrow x = \sqrt{5}$$

$$BC^2 = DC^2 + DB^2 \Rightarrow BC = \sqrt{1^2 + 2^2} = \sqrt{5}$$

⑧



$$AB^2 = BC^2 + AC^2 \Rightarrow AB = \sqrt{5}$$

$$DC = \frac{BC \times AC}{AB} \Rightarrow DC = h_1 = \frac{1 \times 1}{\sqrt{5}} = \frac{1}{\sqrt{5}} = L$$

⑨

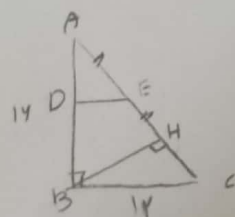
$$L^2 = EC \times BC \Rightarrow \frac{1}{5} \times 1 = EC \times 1 \Rightarrow EC = \frac{1}{5}$$

$$BC = BE + EC$$

$$1 = BE + \frac{1}{5}$$

$$BE = \frac{4}{5}$$

⑩

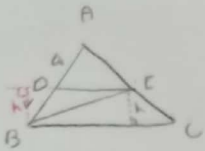


$$AC = \sqrt{AD^2 + DC^2} \Rightarrow AC = \sqrt{14^2 + 1^2} = \sqrt{197}$$

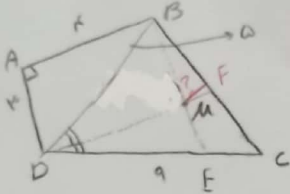
$$BC^2 = HC \times AC \Rightarrow 1^2 = HC \times \sqrt{197} \Rightarrow HC = \frac{1}{\sqrt{197}}$$

$$BH = \frac{AB \times BC}{AC} \Rightarrow BH = \frac{14 \times \sqrt{197}}{\sqrt{197}} = 14$$

$$\frac{DE}{BC} = \frac{AE}{AC} \Rightarrow \frac{DE}{11} = \frac{4}{\sqrt{197}} \Rightarrow \frac{94}{10} \times 11 = \frac{1718}{10}$$



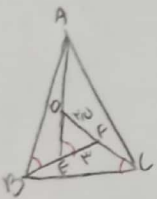
$$\frac{S_{BCE}}{S_{BDE}} = \frac{14}{6} = \frac{BC}{DE} \cdot \frac{AB}{AD} = 2,1 \frac{14}{6}$$



$$\sqrt{x^2 + y^2} = 6 = BD$$

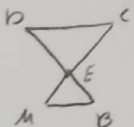
$$\left. \begin{array}{l} DM \parallel BA \\ A = 90^\circ \\ BM = AD \end{array} \right\} \Rightarrow \triangle BMD \cong \triangle BME \Rightarrow D = E \Rightarrow \triangle BMD \cong \triangle BME$$

$$\frac{MF}{x} = \frac{BE}{BC} = \frac{1}{2} \Rightarrow MF = x$$



$$\frac{AB}{DF} = \frac{BC}{EF} = \frac{CA}{DE} \Rightarrow \frac{BC}{EF} = \frac{1}{3}$$

$$AB = \frac{1}{3} \times DF \Rightarrow \frac{1}{3} \times 10 = \frac{2}{3} = 6,67 \Rightarrow AB = 6,67$$

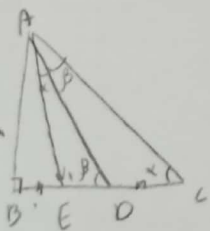


$$\triangle CDE \cong \triangle BEC \Rightarrow \frac{EM}{EC} = \frac{MB}{BC} = \frac{x}{y} = \frac{1}{2} \Rightarrow ME = \frac{EC}{2} \Rightarrow ME = \frac{1}{2} EC$$

$$CM^2 = BM^2 + BC^2 \Rightarrow \sqrt{x^2 + 9} = \sqrt{10}$$

$$\triangle FAM \cong \triangle CMB \Rightarrow \frac{AM}{BC} = \frac{MF}{MC} \Rightarrow \frac{x}{y} = \frac{1}{2} = \frac{MF}{\sqrt{10}} \Rightarrow MF = \frac{\sqrt{10}}{2}$$

$$S = \frac{1}{2} MF \cdot ME \Rightarrow \frac{1}{2} \times \frac{\sqrt{10}}{2} \times \frac{\sqrt{10}}{2} = \frac{10}{4}$$



$$\triangle ADE \cong \triangle AEC \Rightarrow \frac{AE}{EC} = \frac{ED}{AE} \Rightarrow AE^2 = 1 \cdot 1 = 1$$

$$AG^2 = BE^2 + BA^2 \Rightarrow 1 \cdot 1 = 2x^2 + 1 \Rightarrow 2x^2 = 0 \Rightarrow x = 0 \Rightarrow DC = 0$$

$$FE^2 = FD \cdot FC \Rightarrow 14 = 1 \cdot FC \Rightarrow FC = 14$$

$$BC^2 = FC \cdot AC \Rightarrow BC = \sqrt{14 \cdot 16} = 14$$

