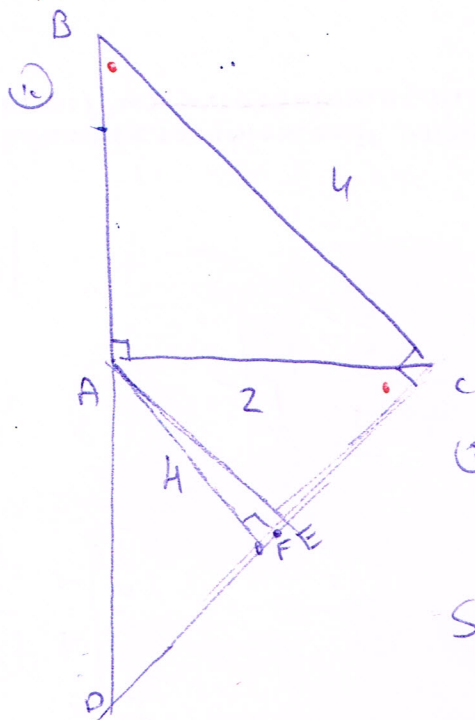


$$\frac{3+4}{4}$$



$$AB = \sqrt{16-4} = 2\sqrt{3}$$

$$(5.5) \triangle ABC \sim \triangle ACD$$

$$\left(\frac{AC}{AB}\right)^2 = \frac{S_{ACD}}{S_{ABC}}$$

$$\left(\frac{2}{2\sqrt{3}}\right)^2 = \frac{S_{ACD}}{\frac{2 \cdot 2\sqrt{3}}{2}} \rightarrow S_{ACD} = \frac{2\sqrt{3}}{3}$$

$$(5) \frac{AC}{AB} = \frac{DC}{BC} \rightarrow DC = \frac{2}{2\sqrt{3}} \cdot 4 = \frac{4}{\sqrt{3}}$$

$$S_{ACD} = \frac{H \cdot DC}{2} \rightarrow \frac{2\sqrt{3}}{3} = \frac{H \cdot 4}{2 \cdot \sqrt{3}} \rightarrow \boxed{H=1}$$

(6) CD ו-BC ו-F הם ישרים ויש אותם נקודה אחת שזוהי F

$$FC = \frac{2}{\sqrt{3}}$$

$$AD = \sqrt{\frac{16}{3} - 4} = \frac{2}{\sqrt{3}}$$

$$\frac{AD}{AC} = \frac{DE}{EC}$$

יש להם נקודה אחת

$$\frac{\frac{2}{\sqrt{3}}}{2} = \frac{DC - EC}{EC} \rightarrow \frac{EC}{\sqrt{3}} = \frac{4}{\sqrt{3}} - EC$$

$$EC = \frac{\frac{4}{\sqrt{3}}}{1 + \frac{1}{\sqrt{3}}} = \frac{4}{1 + \sqrt{3}}$$

$$FE = FC - EC = \frac{2}{\sqrt{3}} - \frac{4}{1 + \sqrt{3}} = \frac{2 + 2\sqrt{3} - 4\sqrt{3}}{\sqrt{3} + 3} = \frac{2 - 2\sqrt{3}}{3 + \sqrt{3}}$$

E - F C הם ישרים F הם, יש להם נקודה אחת

$$FE = EC - FC = \frac{4}{1 + \sqrt{3}} - \frac{2}{\sqrt{3}} = \frac{4\sqrt{3} - 2 - 2\sqrt{3}}{\sqrt{3} + 3} = \frac{2\sqrt{3} - 2}{\sqrt{3} + 3} \cdot \frac{\sqrt{3} - 3}{\sqrt{3} - 3} =$$

$$= \frac{2 \cdot 3 - 2\sqrt{3} - 6\sqrt{3} + 6}{3 - 9} = \frac{-8\sqrt{3} + 12}{-6} = \frac{4\sqrt{3} - 6}{3}$$