

الزوايا

$$(الف) \left(\frac{\sqrt{4}}{4} + \left(-\frac{\sqrt{3}}{4} \right) \right) \left(\frac{\sqrt{4}}{4} - \left(-\frac{\sqrt{3}}{4} \right) \right) = \frac{4}{4} - \frac{3}{4} = \frac{1}{4}$$

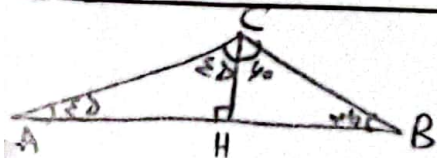
$$ب) \frac{1 + \sqrt{3} \left(\frac{1}{\sqrt{3}} \right)}{\frac{4}{4} + \sqrt{3} \left(\frac{1}{\sqrt{3}} \right)} = \frac{1}{4}$$

$$AH = \frac{\sqrt{4}}{4} \times \sqrt{4} = \frac{\sqrt{4}}{4} \quad \text{فثابتة} \quad \frac{1}{4} + HC^2 = 1 \rightarrow HC = \sqrt{4} = 2$$

$$AH = \frac{\sqrt{3}}{4} \times 4 = \sqrt{3} \rightarrow \sin B = \frac{\sqrt{3}\sqrt{3}}{\sqrt{4}} = \frac{1}{\sqrt{4}} = \frac{\sqrt{4}}{4} \Rightarrow B = 45^\circ$$

$$الف) BD = \frac{80\sqrt{3}}{4} = 80 \quad BC = \frac{80\sqrt{3}}{\frac{\sqrt{3}}{4}} = 160 \rightarrow a = BC - BD = 160$$

$$ب) BC = 2 \times \sqrt{3} = 2\sqrt{3} \rightarrow \sin K = \frac{1}{2\sqrt{3}}$$



$$\rightarrow AC = \sqrt{2} CH \quad \Rightarrow \quad \frac{AB}{AC} = \frac{2CH}{\sqrt{2}CH} = \frac{2}{\sqrt{2}}$$

$$\frac{S_{ABE}}{S_{BCD}} = \frac{\frac{1}{2} \times 4 \times 4 \times \sin B}{\frac{1}{2} \times 4 \times 4 \times \sin B} = \frac{4}{9}$$

$$الف) S = \frac{1}{2} \times 4 \times 4 \times \sin \frac{\sqrt{3}}{4} = 4\sqrt{3}$$

$$ب) S = \frac{1}{2} \times 4 \times 4 \times \sin \frac{\sqrt{3}}{4} = 4\sqrt{3}$$

$$\begin{aligned} & \rightarrow PQ = 2, QN = 4 \Rightarrow PQ = \sqrt{20} \\ & \cos \theta = \frac{PQ}{P_2} = \frac{\sqrt{20}}{4} \end{aligned}$$

$$2y = 2x + 8 \rightarrow y_1 = x + \frac{8}{2} \rightarrow \tan \theta = 1 \quad m = \tan 45 = \sqrt{4} \rightarrow -\sqrt{4}$$

$$\Rightarrow mb = \frac{8}{2} \times -\sqrt{4} = -\frac{8\sqrt{4}}{4}$$

$$\cos \frac{11}{4}\pi + \sin \frac{10}{4}\pi - \tan \frac{3\pi}{4} = \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} - \sqrt{2} = 0$$

(9)

$$\frac{\cos x + (-\sin x)}{-\cos x + \sin x} = -1$$

(10)