

$$\text{الف) } \left(\frac{\sqrt{2}}{2} - \frac{\sqrt{3}}{2} \right) \left(\frac{\sqrt{2}}{2} + \frac{\sqrt{3}}{2} \right) = \left(\frac{\sqrt{2}}{2} \right)^2 - \left(\frac{\sqrt{3}}{2} \right)^2 = \frac{2}{4} - \frac{3}{4} = -\frac{1}{4} \checkmark$$

$$\text{ب) } \frac{1 + (2 \times \frac{1}{2})}{(4 \times \frac{2}{3}) + (2 \times \frac{1}{2})} = \frac{2}{5} \checkmark$$

$$\text{الف) } AH = \sin 60^\circ \times \sqrt{6} = \frac{\sqrt{3}}{2} \times \sqrt{6} = \frac{\sqrt{18}}{2} = \frac{3\sqrt{2}}{2} = \sqrt{3}$$

$$(2\sqrt{3})^2 = \sqrt{3}^2 + HC^2 = 12 \quad HC^2 = 12 - 3 = 9 \rightarrow HC = 3$$

$$\text{ب) } \frac{\sqrt{6}}{2} \times AC = 9 \rightarrow AC = \frac{9}{\frac{\sqrt{6}}{2}} = \frac{18}{\sqrt{6}} = \frac{3\sqrt{6}}{1} = 3\sqrt{6}$$

$$AH^2 = \frac{1}{4} \times 6 \times 6 = 9$$

$$3\sqrt{6} \times \sin B = 3\sqrt{6} \quad \sin B = \frac{3\sqrt{6}}{3\sqrt{6}} = \frac{\sqrt{2}}{2} \checkmark \rightarrow \hat{B} = 45^\circ \text{ دقت!}$$

$$\text{الف) } \frac{\sqrt{6}}{2} \times AD = 5\sqrt{3} \quad AD = 100 \quad BD = \frac{1}{2} \times 100 = 50$$

$$\frac{1}{2} \times AC = 5\sqrt{3} \quad AC = 10\sqrt{3} \quad BC = \frac{\sqrt{6}}{2} \times 10\sqrt{3} = 15$$

$$x = BC - BD = 15 - 50 = -35$$

$$\text{ب) } AC \times \frac{1}{2} = 2 \rightarrow AC = 4 \quad BC = \frac{\sqrt{2}}{2} \times 4 = 2\sqrt{2} \quad CD^2 = 12 + 1 = 13 \quad CD = \sqrt{13}$$

$$\sin \alpha = \frac{1}{\sqrt{13}} \times \frac{\sqrt{13}}{\sqrt{13}} = \frac{\sqrt{13}}{13} \checkmark$$

$$AC = x \quad \frac{BH}{x} = \frac{\sqrt{2}}{2} \times x \times \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2} x \quad CH = \frac{\sqrt{2}}{2} x \quad BH = \frac{\sqrt{2}}{2} x$$

$$AB = \frac{\sqrt{2}}{2} x + \frac{\sqrt{2}}{2} x = \frac{\sqrt{2} + \sqrt{2}}{2} x$$

$$\frac{AC}{AB} = \frac{x}{\frac{\sqrt{2} + \sqrt{2}}{2} x} = \frac{2}{\sqrt{2} + \sqrt{2}} \checkmark$$

سوال نسبت $\frac{AB}{AC}$ رو بر خواد

$$\left. \begin{aligned} S(\triangle ABE) &= \frac{2 \sin B \times 4}{2} \\ &= 4 \sin B \\ S(\triangle BCD) &= \frac{2 \sin B \times 3}{2} \\ &= 3 \sin B \end{aligned} \right\} \frac{S(\triangle ABE)}{S(\triangle BCD)} = \frac{4 \sin B}{3 \sin B} = \frac{4}{3} \checkmark$$

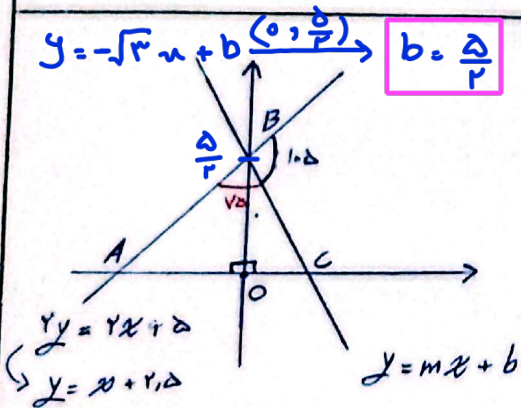
$$\rightarrow 1) \frac{\sqrt{r}}{r_1} \times r \times \cancel{r} = r\sqrt{r} \checkmark$$

$$\frac{1}{r} \cdot r \cdot r \cdot \frac{\sqrt{r}}{r} = r\sqrt{r} \quad \checkmark$$

$$r^2 + r^2 = 1 + 19 = 20 \rightarrow \sqrt{20} = PQ$$

$$\cos \theta = \frac{r}{\sqrt{r_0}} \times \frac{\sqrt{r_0}}{\sqrt{r_0}} = \frac{r\sqrt{r_0}}{r_0} = \frac{r\sqrt{\Delta}}{\cancel{r_0}_\Delta} = \frac{r\sqrt{\Delta}}{\Delta} \quad \checkmark$$

$$y = -\sqrt{r}x + b \xrightarrow{(0, \frac{b}{\sqrt{r}})} b = \frac{\Delta}{r}$$



$$1A_0 - 1.2 = V\Delta \quad 130 = 1.2 \quad V\Delta - f\Delta = r^*$$

$$\frac{\sqrt{r}}{r} \times BC = \frac{2}{r} \rightarrow BC = 2\sqrt{r}$$

$$B_0 = \frac{\Delta \sqrt{r}}{r} \rightarrow b = \frac{\Delta \sqrt{r}}{r}$$

$$m = \frac{\frac{\sqrt{r}}{r}}{\frac{1}{r}} = \sqrt{r} \quad mb = \sqrt{r} \times \frac{\Delta \sqrt{r}}{r} = \frac{\Delta \sqrt{r}}{\sqrt{r}}$$

$$f\left(\frac{\Delta \pi}{\gamma}\right) = \cos\left(\pi + \frac{\Delta \pi}{\gamma}\right) + \sin\left(\frac{\pi}{\gamma} - \frac{\Delta \pi}{\gamma}\right) - \tan\left(\frac{\pi}{\gamma} + \frac{\Delta \pi}{\gamma}\right)$$

$$\rightarrow -\cos \frac{2\pi}{4} + \cos \frac{2\pi}{4} + \cot \frac{2\pi}{4} = \cancel{\frac{\sqrt{r}}{r}} - \cancel{\frac{\sqrt{r}}{r}} + \sqrt{r} = \sqrt{r}$$

رفت!

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

ربع دوم
Sinn ونبه!