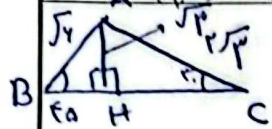


$$\left(\frac{\sqrt{y}}{y} + \left(-\frac{\sqrt{y}}{y}\right)\right) \left(\frac{\sqrt{y}}{y} - \left(-\frac{\sqrt{y}}{y}\right)\right) = \left(\frac{\sqrt{y}}{y} + \frac{\sqrt{y}}{y}\right) \left(\frac{\sqrt{y}}{y} - \frac{\sqrt{y}}{y}\right) = \frac{y}{y} - \frac{y}{y} = -\frac{1}{y}$$

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$$\frac{1 + 3(-\sqrt{3})^2}{3+1} = \frac{10}{4} = \frac{5}{2} = \frac{d}{r} = 2,5$$

(ب)



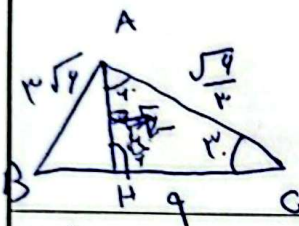
$$\sin 60^\circ = \frac{AH}{\sqrt{4}} = \frac{\sqrt{3}}{2} \Rightarrow AH = \sqrt{3}$$

(الف)

$$\frac{\sqrt{3}}{2\sqrt{3}} = \sin C = \frac{1}{2} \Rightarrow C = 30^\circ$$

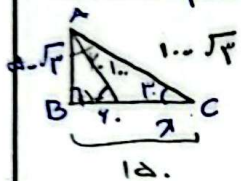
$$\cos 30^\circ = \frac{CH}{2\sqrt{3}} = \frac{\sqrt{3}}{2} \Rightarrow CH = 3$$

(ج)



$$\cos 30^\circ = \frac{CH}{AC} = \frac{\sqrt{3}}{2} = \frac{9}{4\sqrt{3}}$$

$$\sin B = \frac{AH}{BC} = \frac{1}{2} \Rightarrow B = 30^\circ$$



$$\sin 45^\circ = \frac{\sqrt{3}}{2} = \frac{a \cdot \sqrt{3}}{1}$$

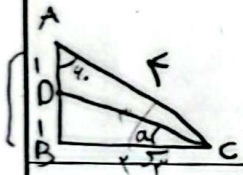
$$1a - a = 100$$

(الف)

$$\sin 30^\circ = \frac{1}{2} = \frac{a \cdot \sqrt{3}}{100\sqrt{3}}$$

$$\sin 45^\circ = \frac{\sqrt{3}}{2} = \frac{1a}{100\sqrt{3}}$$

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$$\sin 30^\circ = \frac{1}{2} = \frac{r}{r}$$

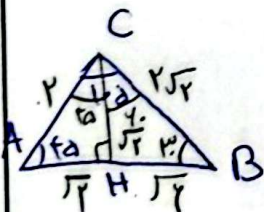
$$\sin 45^\circ = \frac{\sqrt{3}}{2} = \frac{r\sqrt{3}}{r}$$

$$\sin \alpha = \frac{1}{\sqrt{13}} \quad (2\sqrt{3})^2 + (1)^2 = CD^2 \quad 12+1 = \sqrt{13} = DC$$

(ج)

$$\frac{AB}{AC} = \frac{\sqrt{2} + \sqrt{2}}{2} = \left(\frac{\sqrt{2}}{2}\right) \left(\frac{\sqrt{2}}{2}\right)$$

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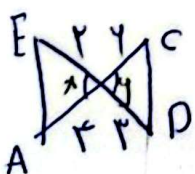
$$\cos 60^\circ = \frac{AH}{AC} = \frac{\sqrt{2}}{2}$$

$$\sin 30^\circ = \frac{1}{2} = \frac{CH}{CB} = \frac{\sqrt{2}}{2\sqrt{2}}$$

$$(\sqrt{2})^2 + (CH)^2 = (2)^2 \quad CH = \sqrt{2}$$

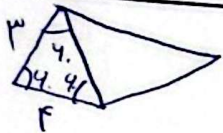
$$(\sqrt{2})^2 + (HB)^2 = (2\sqrt{2})^2 \Rightarrow HB = \sqrt{6}$$

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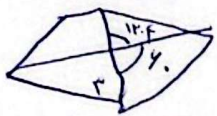
$$x = y$$

$$\frac{\frac{1}{r} \sin x \times f \times l}{\frac{1}{r} \times \sin y \times l \times y} = \frac{1}{1} = \frac{f}{y}$$



$$\left(\frac{1}{2} \times \frac{\sqrt{3}}{2} \times 2 \times 2 \right) 12 = \frac{12\sqrt{3}}{2} = 6\sqrt{3}$$

الف



$$\left(\frac{1}{2} \times \frac{\sqrt{3}}{2} \times 2 \times 2 \right) 12 = 12\sqrt{3}$$

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