

$$الف) \frac{2V}{1A} = \frac{X}{\pi} \Rightarrow X = \frac{2\pi V}{1A}$$

$$ج) \frac{\frac{\omega \pi}{12}}{\pi} = \frac{X}{1A} \Rightarrow X = 12\omega$$

$$ب) \frac{12\omega}{1A} = \frac{X}{\pi} \Rightarrow X = \frac{12\omega \pi}{1A}$$

$$د) \frac{\frac{X \pi}{9}}{\pi} = \frac{X}{1A} \Rightarrow X = 1A$$

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$$\frac{12\omega a}{9} = \frac{\frac{\omega}{12} a}{\frac{X}{9}}$$

$$\frac{\omega}{12} a + \frac{X\omega}{9} a + 1 \cdot a = 1A$$

$$\frac{\frac{a \pi}{1}}{\pi} = \frac{\frac{X\omega}{9} a}{1A}$$

$$\Rightarrow \frac{\omega + 9 + X}{9} a = 1A \Rightarrow a = 9$$

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$$الف) \frac{1}{r} \times \frac{\sqrt{r}}{r} - \frac{\sqrt{r}}{r} \times \frac{1}{r} - 1 + r = 1$$

$$ب) \frac{\left(\frac{\sqrt{r}}{r}\right)^2 + (1)^2 + (\sqrt{r})^2}{\sqrt{r} - \frac{\sqrt{r}}{r}} = \frac{\frac{r}{9} + 1 + r}{\frac{r\sqrt{r}}{r}} = \frac{\frac{r}{9} + 1 + r}{\sqrt{r}} = \frac{13}{r\sqrt{r}}$$

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$$-\frac{1}{r} \times \frac{1}{r} + \frac{\sqrt{r}}{r} \times \frac{\sqrt{r}}{r} = -\frac{1}{r} + \frac{r}{r} = \frac{r}{r} = \sin^2 \theta \Rightarrow \sin \theta = \pm \frac{\sqrt{r}}{r} \Rightarrow \frac{\sqrt{r}}{r} \Rightarrow \theta = 45^\circ$$

$$\tan \theta = \tan 45^\circ = 1$$

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$$\frac{r \times \frac{\sqrt{r}}{r} \left(1 - \frac{r}{9}\right)}{\left(1 - \frac{r}{9}\right)^2} = \frac{r \times \frac{\sqrt{r}}{r} \times \frac{r}{r}}{\frac{r}{9}} = \sqrt{r} = \tan \theta \Rightarrow \theta = 45^\circ = \frac{\pi}{4}$$

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$$\tan \theta = \omega \rightarrow \frac{1}{\cos^r \theta} = 1 + \tan^r \theta = 2 \Rightarrow \cos^r \theta = \frac{1}{2} \Rightarrow \cos \theta = \pm \frac{1}{\sqrt{2}}$$

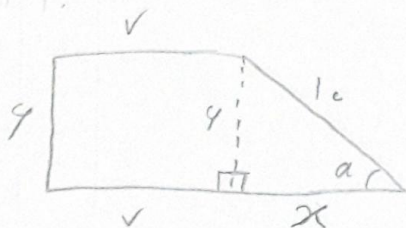
$$\sin^r \theta = 1 - \cos^r \theta \rightarrow 1 - \frac{1}{2} = \frac{1}{2} \Rightarrow \sin \theta = \pm \frac{1}{\sqrt{2}}$$

$$\frac{\frac{1}{\sqrt{2}} - \frac{1}{\sqrt{2}}}{\frac{0}{\sqrt{2}} - \frac{1}{\sqrt{2}}} = \frac{\frac{1}{\sqrt{2}}}{\frac{1}{\sqrt{2}}} = 1$$

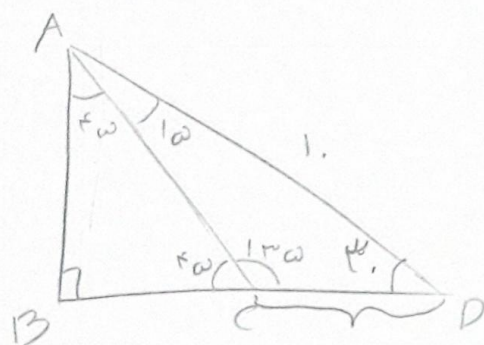
$$\left\{ \frac{-\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}}}{-\frac{0}{\sqrt{2}} + \frac{1}{\sqrt{2}}} = \frac{\frac{1}{\sqrt{2}}}{\frac{1}{\sqrt{2}}} = 1 \right.$$

$$\sin = \frac{9}{1} = \frac{\text{مقابل}}{\text{وتر}}$$

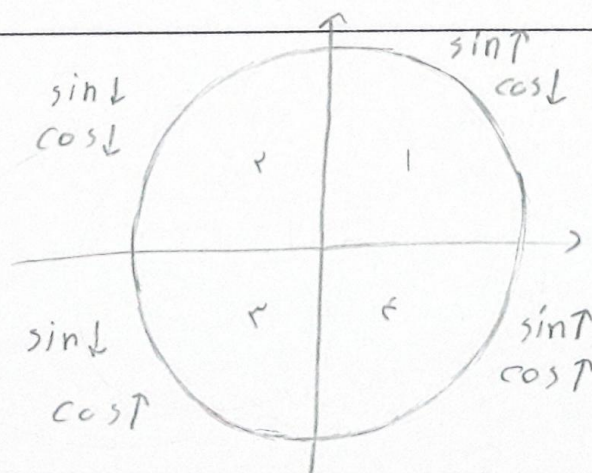
$$1^2 = 9^2 + x^2 \Rightarrow 1 - 81 = x^2 \Rightarrow x^2 = -80 \Rightarrow x = 1$$



$$1 + 9 + 9 + 1 = 20$$



$$\cos \omega = \frac{\sqrt{3}}{2} = \frac{1}{2} = \frac{x}{1} \Rightarrow DC = x = \frac{1}{2}$$



الف) ناصیه ۳

ب) ناصیه ۲

$$\frac{1}{\cos^r} = 1 + \tan^r$$

$$\Rightarrow \frac{1}{\cos^r} = 1 + \left(\frac{1}{3}\right)^r = \frac{1}{9} \Rightarrow \cos^r = \frac{9}{1} \Rightarrow \cos = -\frac{1}{\sqrt{10}}$$

ناصیه ۲

$$\sin^r = 1 - \cos^r \Rightarrow \sin^r = 1 - \frac{9}{1} = \frac{1}{1} \Rightarrow \sin = -\frac{1}{\sqrt{10}}$$