

18, 75

$$\frac{2V}{10} = \frac{\text{Rad}}{\pi} \Rightarrow 2V = \frac{10}{\pi} \pi \text{ Rad} \checkmark$$

(الف) (1)

$$\frac{2V}{10} = \frac{\text{Rad}}{\pi} \Rightarrow 2V = \frac{10}{\pi} \pi \text{ Rad} \checkmark$$

$$\frac{2V}{10} = \frac{x}{10} \Rightarrow x = \frac{2V \times 10}{10} = 2V \checkmark$$

$$\frac{2V}{10} = \frac{x}{10} \Rightarrow x = 10 \checkmark$$

$$\frac{2V}{10} = \frac{x}{10} \Rightarrow x = \frac{2V \times 10}{10} = 2V \checkmark$$

$$x + y + 10 = 10 \Rightarrow$$

$$2V + 10 + 10 = 10 \Rightarrow 2V = 10 = 10$$

$$\frac{2V}{10} = \frac{y}{10} \Rightarrow y = 2V \checkmark$$

$$a = 4$$

$$-\tan 45^\circ + \cot 45^\circ = \cot 45^\circ$$

$$\frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{1} - \left(\frac{\sqrt{3}}{1} \times \frac{1}{\sqrt{3}} \right) + 1 = \frac{\sqrt{3}}{1} - \frac{\sqrt{3}}{1} + 1 = 1 \checkmark$$

$$\frac{\frac{1}{\sqrt{3}} + 1 + \sqrt{3}}{\sqrt{3} - \frac{\sqrt{3}}{\sqrt{3}}} = \frac{\frac{1}{\sqrt{3}}}{\frac{1}{\sqrt{3}}} = \frac{1}{1} = 1 \checkmark$$

دقت!

$$-\sin^2 45^\circ + \sin^2 45^\circ = \sin^2 \theta \Rightarrow -\frac{1}{4} + \frac{1}{4} = \sin^2 \theta \Rightarrow$$

$$\sin^2 \theta = \frac{1}{4} \Rightarrow \sin \theta = \pm \frac{1}{2}$$

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

$$\theta = 45^\circ \checkmark$$

$$\tan \theta = \frac{\frac{1}{\sqrt{3}}}{\frac{1}{\sqrt{3}}} = \frac{1}{1} = 1 \Rightarrow \theta = 45^\circ$$

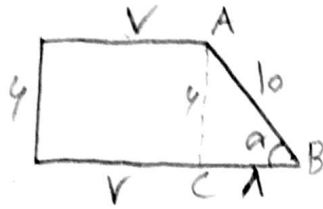
$$\frac{40}{10} = \frac{\text{Rad}}{\pi} \Rightarrow 40^\circ = \frac{\pi}{9} \text{ Rad} \checkmark$$

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

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

$$\frac{10 \cos \theta - \cos \theta}{10 \cos \theta - \cos \theta} = \frac{14 \cos \theta}{2 \cos \theta} = 7 \checkmark$$

$$\sin \theta = \omega \cos \theta$$

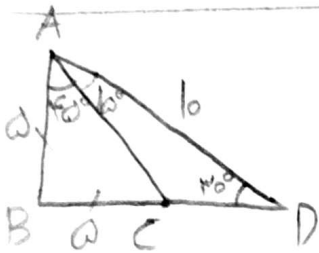


$$\sin \alpha = 0.4$$

$$\sin \alpha = \frac{AC}{AB} \Rightarrow \frac{4}{10} = \frac{4}{AB} \Rightarrow AB = 10$$

(7) (2)

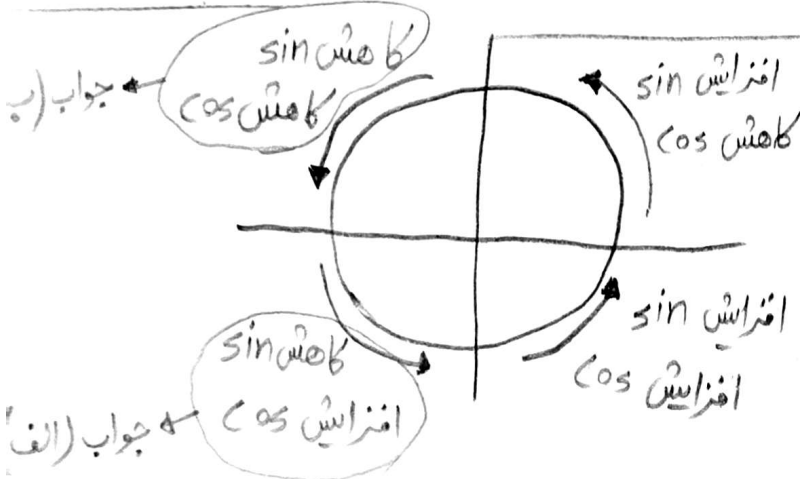
ΔABC طول اضلاع $\rightarrow BC = 1$ $P_{\text{دورانه}} = 4 + 4 + 1 + 10 = 19$ ✓



$$\sin 30^\circ = \frac{1}{2} = \frac{AB}{10} \Rightarrow AB = 5 \rightarrow AB = BC \Rightarrow BC = 5$$

$$\sin 45^\circ = \frac{\sqrt{2}}{2} = \frac{BD}{10} \Rightarrow BD = 5\sqrt{2} \quad DC = 5\sqrt{2} - 5 \quad \checkmark$$

(8) (2)



(9) الف) ناحیه 3 ✓

(2) ب) ناحیه 2 ✓

(10)

$$\tan^2 x + 1 = \frac{1}{\cos^2 x} \Rightarrow \frac{9}{10} = \cos^2 x \Rightarrow \cos x = \frac{\sqrt{9}}{\sqrt{10}} = \frac{3}{\sqrt{10}}$$

(2)

$$\sin^2 x = 1 - \cos^2 x \Rightarrow \sin^2 x = 1 - \frac{9}{10} \Rightarrow \sin x = \frac{\sqrt{1}}{\sqrt{10}} = \frac{1}{\sqrt{10}} \quad \checkmark$$