

آزمایشی کرده هم نتایج

۲۰

الف) $27 \times \frac{\pi}{180} = \frac{3\pi}{20} \text{ rad}$

ب) $125 \times \frac{\pi}{180} = \frac{25\pi}{36} \text{ rad}$

ج) $\frac{5\pi}{12} \times \frac{180}{\pi} = 75^\circ$

✓

د) $\frac{4\pi}{9} \times \frac{180}{\pi} = 80^\circ$

20

$\frac{125a}{9} = \frac{D}{180} \rightarrow D = \frac{125a}{9} \times \frac{180}{1} = 12,5a$

۲۰

✓

$\frac{a\pi}{180} \times \frac{180}{\pi} = 12,5a$

$10a + 12,5a + 12,5a = 180 \rightarrow a = 8$

۴۵۰

الف) $\frac{1}{2} \times \frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{2} \times \frac{1}{2} - 1 + 2 = 1$

۲۵

ب) $\frac{\frac{1}{2} + 1 + 3}{\frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{2}} = \frac{\frac{13}{2}}{\frac{\sqrt{3}}{2}} = \frac{13}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} = \frac{13\sqrt{3}}{3}$

✓

Parsian

30

(2) ✓

$$-\frac{1}{y} \times \frac{1}{y} + \frac{\sqrt{x}}{y} \times \frac{\sqrt{x}}{y} = \frac{1}{y} \sin \theta \quad -2$$

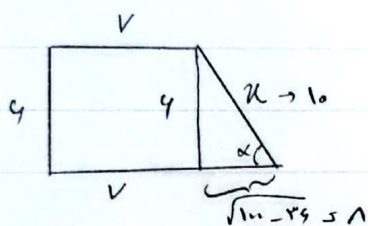
$$\rightarrow \sin \theta = \pm \frac{\sqrt{x}}{y} \rightarrow \theta = 45^\circ, 135^\circ \text{ or } 225^\circ \rightarrow \theta = 45^\circ \quad (\tan \theta = 1)$$

$$\frac{\frac{\sqrt{x}}{y} (1 - \frac{1}{y})}{(1 - \frac{1}{y})^2} = \frac{\frac{\sqrt{x}}{y}}{\frac{1}{y}} = \sqrt{x} \tan \theta \quad -3$$

$$\rightarrow \theta = 45^\circ, 135^\circ \text{ or } 225^\circ \rightarrow \theta = 45^\circ \rightarrow \theta = \frac{\pi}{4} \text{ rad} \quad (2) \checkmark$$

cos θ = 1/√2

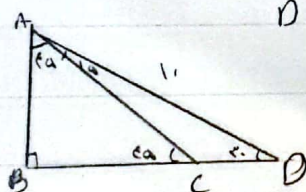
$$\frac{y \tan \theta - 1}{\tan \theta - x} = \frac{12 - 1}{2 - 1} = 11 \quad (2) \checkmark \quad -4$$



$$\sin \alpha = \frac{4}{10} = \frac{2}{5} \rightarrow \alpha = 23.6^\circ$$

$$\text{Perimeter} = 4 + 4 + 4 + 1 + 1 = 14 \quad (3) \checkmark$$

(2) ✓



$$\hat{D} = 110^\circ - (40^\circ + 40^\circ) = 30^\circ$$

$$\sin 30^\circ = \frac{AB}{AD} = \frac{1}{2} \rightarrow AB = 1$$

$$\tan 40^\circ = \frac{AB}{BC} = 1 \rightarrow BC = 1$$

$$\sin 40^\circ = \frac{BD}{AD} = \frac{\sqrt{2}}{2} \rightarrow BD = \sqrt{2} \quad DC = \sqrt{2} - 1 \quad (4) \checkmark$$

(2) ✓

الف) تابع زوج ب) تابع فرد



$$AC = \sqrt{1+9} = \sqrt{10}$$

$$\sin \alpha = \left(\frac{1}{\sqrt{10}} \right) \rightarrow \alpha = 18.4^\circ$$

(2) ✓