

تکلیف سری ۱۶

>> بنانا/ضد

الفیاء لریاسیان

۱۹، ۵ آفرین ضعیف خوب نوشتی !!

۱- الف) $27^\circ = (x) \text{ rad} \rightarrow \frac{27^\circ}{180^\circ} = \frac{x}{\pi} \rightarrow x = \frac{3\pi}{20}$

ب) $120^\circ = (x) \text{ rad} \rightarrow x = 120^\circ \times \frac{\pi}{180^\circ} = \frac{2\pi}{3}$

ج) $\frac{5\pi}{12} \text{ rad} = (x)^\circ \rightarrow \frac{x}{180^\circ} = \frac{5\pi}{12\pi} \rightarrow x = 75^\circ$

د) $\frac{5\pi}{9} \text{ rad} = (x)^\circ \rightarrow x = 180^\circ \times \frac{5}{9} = 100^\circ$

۲- $\frac{120a}{180^\circ} = \frac{x}{180^\circ} \rightarrow x = 120a$ $\frac{a\pi}{180^\circ} = \frac{x}{180^\circ} \rightarrow x = a\pi$

$120a + 220a + 10a = 110$

$50a = 110$

$a = 2$

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

ب) $\frac{\frac{3}{9} + 1 + 2}{\sqrt{2} - \frac{\sqrt{2}}{2}} = \frac{\frac{12}{9}}{\frac{2\sqrt{2}}{2}} = \frac{12}{2\sqrt{2}} = \frac{6\sqrt{2}}{2}$

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

$-\frac{1}{2} + \frac{2}{2} = \sin^2 \theta$

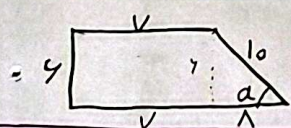
$\frac{1}{2} = \sin^2 \theta \rightarrow \sin \theta = \frac{\sqrt{2}}{2} \rightarrow \tan \theta = 1$

$\frac{2 \times \frac{\sqrt{2}}{2} (1 - \frac{3}{9})}{(1 - \frac{3}{9})^2} = \frac{2\sqrt{2}}{\frac{4}{9}} = \sqrt{2} = \tan \theta \rightarrow \theta = 45^\circ = \frac{\pi}{4}$

$\tan \theta = a$ $\frac{r \sin \theta - \cos \theta}{\sin \theta - r \cos \theta} = \frac{1a \cos \theta - \cos \theta}{\cos \theta} = \frac{1 - \cos \theta}{\cos \theta} = 1$

$\frac{\sin \theta}{\cos \theta} = a$

$\sin \theta = a \cos \theta$

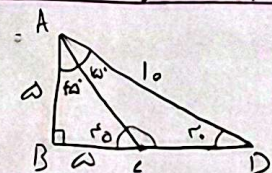


$\sin \theta = \frac{4}{10}$

$\frac{4}{10} = \frac{4}{10}$

$10 + 10 + 10 = 30$

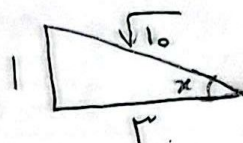
$100 - 25 = 75 \rightarrow BD = \sqrt{75} = 5\sqrt{3} \rightarrow DC = 5\sqrt{3} - 5 = 5(\sqrt{3} - 1)$



الف) ربع سوم $\rightarrow$ Sin از سمت 0 به 1 - می رود $\leftarrow$ کاهش
Cos از سمت 1 - به 0 می رود $\leftarrow$ افزایش

ب) ربع دوم $\rightarrow$ Sin از 0 به سمت 1 می رود $\leftarrow$ افزایش
Cos از 1 به سمت 0 می رود $\leftarrow$ کاهش

$$\tan x = \frac{1}{3}$$



$$\sin x = \frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10}$$

کمان در ناحیه دوم است پس $\sin x$ و $\cos x$

$$1 + \tan^2 x = \frac{1}{\cos^2 x} \rightarrow 1 + \frac{1}{9} = \frac{1}{\cos^2 x} \rightarrow \cos^2 x = \frac{9}{10}$$

$$\sin^2 x = 1 - \cos^2 x \rightarrow \sin^2 x = 1 - \frac{9}{10} = \frac{1}{10} \rightarrow \sin x = \pm \frac{\sqrt{10}}{10}$$

$$\sin x = -\frac{\sqrt{10}}{10} \leftarrow \sin x \text{ چون}$$