

نام و نام خانوادگی: ..... پاسخنامه تشریحی تکلیف شماره ۱۹. کلاس ۳. برای این سوال

الف)  $\frac{27}{11} = \frac{Rad}{\pi} \Rightarrow 27\pi = 11 \cdot Rad \Rightarrow Rad = \frac{27\pi}{11} = \frac{27\pi}{20}$

ب)  $\frac{15}{11} = \frac{Rad}{\pi} = 15\pi = 11 \cdot Rad \Rightarrow Rad = \frac{15\pi}{11} = \frac{25\pi}{36}$

ج)  $\frac{D}{11} = \frac{5\pi}{\pi} \Rightarrow D = 55 \Rightarrow D = 55^\circ$

د)  $\frac{D}{11} = \frac{5\pi}{\pi} \Rightarrow 55 = 9D \Rightarrow D = 10^\circ$

$\frac{a\pi}{\pi} = \frac{D}{11} \Rightarrow 11a = 11D \Rightarrow D = 2,5a$   $\frac{15a}{9} = \frac{D}{11} \Rightarrow D = 1,5a$

$5a = 11 \Rightarrow a = 2$

$10a = 5$

$1,5a = 5$

$2,5a = 9$

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

ب)  $\frac{(\frac{\sqrt{2}}{2})^2 + 1 + (\frac{\sqrt{2}}{2})^2}{\sqrt{2} - \frac{\sqrt{2}}{2}} = \frac{\frac{1}{2} + 1 + \frac{1}{2}}{\frac{2\sqrt{2}}{2} - \frac{\sqrt{2}}{2}} = \frac{2}{\frac{\sqrt{2}}{2}} = \frac{4}{\sqrt{2}} = 2\sqrt{2}$

$(-\frac{1}{2} \times \frac{1}{2}) + (\frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2}) = \frac{1}{2} = \sin^2 \theta \Rightarrow \sin \theta = \frac{\sqrt{2}}{2} \Rightarrow \cos \theta = \frac{\sqrt{2}}{2}$

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

$\frac{2 \tan^2 \theta (1 - \tan^2 \theta)}{(1 - \tan^2 \theta)^2} = \frac{2 \tan^2 \theta}{1 - \tan^2 \theta} = \frac{2}{\frac{1}{\tan^2 \theta}} = \frac{2}{\sqrt{2}} = \frac{\sqrt{2}}{1} = \sqrt{2} = \tan \theta$

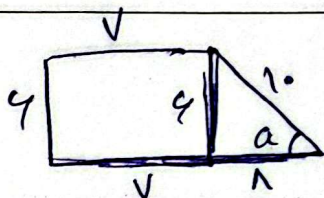
$\Rightarrow \theta = 45^\circ = \theta = \frac{\pi}{4}$

سوال بر حسب رادین خواسته

$$\tan \theta = \frac{\sin \theta}{\cos \theta} \Rightarrow \sin \theta = \tan \theta \cdot \cos \theta \Rightarrow \sqrt{\sin \theta} = \sqrt{\tan \theta \cdot \cos \theta} = 1 \cdot \cos \theta$$

$$\sin \theta = \tan \theta \cdot \cos \theta = \cos \theta \Rightarrow \frac{1 \cdot \cos \theta - \cos \theta}{\cos \theta - \cos \theta} = 1$$

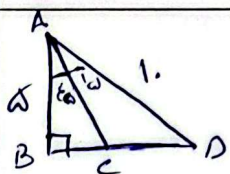
(۲) ✓



$$\sin \alpha = \frac{4}{5} \Rightarrow \text{وتر} = 5 \Rightarrow 4^2 + 1^2 = 5^2$$

$$x^2 = 4^2 \Rightarrow x = 4 \quad \sqrt{4^2 + 1^2} = 5$$

(۲) ✓



$$\sin \gamma = \frac{\sqrt{5}}{5} = \frac{BD}{5} \Rightarrow BD = \sqrt{5} \quad \cos \gamma = \frac{1}{5} = \frac{AB}{5} \Rightarrow AB = 1$$

$$\tan \epsilon = 1 \Rightarrow BC = 1 \Rightarrow DC = \sqrt{5} - 1 \approx \frac{3}{2}$$

(۲) ✓

الف) ناحیه سوم

ب) ناحیه دوم

(۲) ✓

$$\tan \alpha = \frac{1}{5} \Rightarrow \frac{\sin \alpha}{\cos \alpha} = \frac{1}{5} \Rightarrow \cos \alpha = 5 \sin \alpha \quad \sin^2 \alpha + \cos^2 \alpha = 1$$

$$\sin^2 \alpha + (5 \sin \alpha)^2 = 1 \Rightarrow 26 \sin^2 \alpha = 1 \Rightarrow \sin^2 \alpha = \frac{1}{26} \Rightarrow \sin \alpha = \frac{1}{\sqrt{26}} = \frac{\sqrt{10}}{10}$$

(۱/۲)

این ناحیه سوم است پس  $\sin \theta$  منفی است