

نام و نام خانوادگی آریطائی پاسخنامه تشریحی تکلیف شماره ۱.۸.. کلاس یازدهم نام و نام خانوادگی

$$A = \tan\left(\frac{\pi}{4}\right) \rightarrow \tan\left(-2\theta + \frac{\pi}{4}\right) = \tan\left(\frac{\pi}{4}\right) \rightarrow -2\theta + \frac{\pi}{4} = \frac{\pi}{4}$$

$$\rightarrow 2\theta = \frac{\pi}{4} \rightarrow \theta = \frac{\pi}{8} = A$$

$$B = \tan\left(-2\theta + \frac{\pi}{4}\right) = 1$$

$$S = \frac{1}{2} \times BO \times AC = \frac{1}{2} \times 1 \times \frac{\pi}{4} = \frac{\pi}{8}$$

$$C = \tan\left(-\frac{\pi}{4}\right) = \tan\left(-2\theta + \frac{\pi}{4}\right) \rightarrow -\frac{\pi}{4} = -2\theta + \frac{\pi}{4} \rightarrow 2\theta = \frac{\pi}{2} \rightarrow \theta = \frac{\pi}{4}$$

$$\theta = \frac{\pi}{4} \rightarrow \frac{\pi}{4} - \frac{\pi}{4} \sin \alpha - \frac{1}{4} (\cos \alpha)^2 \rightarrow 1 - 2 \sin \alpha - 1 (1 - \sin^2 \alpha) = 0$$

$$\rightarrow 2 \sin^2 \alpha - 2 \sin \alpha + 1 = 0 \rightarrow (\sin \alpha - \frac{1}{2}) (\sin \alpha - \frac{1}{2}) = 0 \rightarrow \sin \alpha = \frac{1}{2}$$

$$\rightarrow \sin \alpha = \frac{1}{2}$$

$$1 + \tan^2 \alpha = \frac{1}{\sin^2 \alpha} = \frac{1}{\frac{1}{4}} = 4$$

$$\log(\sin \alpha) + \log(\cos \alpha) = \log 3 \rightarrow \sin \alpha \cos \alpha = 3$$

$$\sin \alpha \cos \alpha = 3 \rightarrow \sin \alpha \cos \alpha = 3 \rightarrow \sin \alpha \cos \alpha = 3$$

$$\log(\sin \alpha) - \log(\cos \alpha) = \log 3 \rightarrow \log \frac{\sin \alpha}{\cos \alpha} = \log 3 \rightarrow \tan \alpha = 3$$

$$\rightarrow \sin \alpha = \frac{3}{\sqrt{10}} \rightarrow \cos \alpha = \frac{1}{\sqrt{10}} \rightarrow \sin \alpha + \cos \alpha = \frac{3}{\sqrt{10}} + \frac{1}{\sqrt{10}} = \frac{4}{\sqrt{10}}$$

$$\sin^2 \theta + \cos^2 \theta = \frac{5}{2} \rightarrow (1 - \cos^2 \theta) + \cos^2 \theta = \frac{5}{2}$$

$$\rightarrow 1 - 2 \cos^2 \theta + \cos^2 \theta + \cos^2 \theta = \frac{5}{2} \rightarrow \cos^2 \theta - \cos^2 \theta = \frac{1}{2}$$

$$\rightarrow \cos^2 \theta - (1 - \sin^2 \theta) = \frac{1}{2} \rightarrow \cos^2 \theta + \sin^2 \theta = \frac{3}{2}$$

$$\sin \theta \times \tan \theta - \frac{1}{\cos \theta} > 0 \rightarrow \frac{\sin \theta (1 - \sin^2 \theta)}{\cos \theta} > 0 \rightarrow \frac{\sin \theta \cos^2 \theta}{\cos \theta} > 0 \rightarrow \sin \theta \cos \theta > 0$$

$$\frac{\sin \theta (3 + \cos \theta)}{2(1 - \cos \theta)} < 0 \rightarrow \frac{\sin \theta (3 + \cos \theta)}{\sin \theta} < 0 \rightarrow \frac{3 + \cos \theta}{\sin \theta} < 0$$

$$3 + \cos \theta > 0 \rightarrow \sin \theta < 0 \rightarrow \text{موجب است زیرا باید جلوی کسری باشد}$$

$$\frac{Y}{\sin \theta} + \frac{W}{\cos \theta} = 0 \rightarrow Y \cos \theta + W \sin \theta = 0 \rightarrow Y \cos \theta = -W \sin \theta$$

$$\rightarrow \tan \theta = \frac{-Y}{W} \rightarrow \cot \theta = \frac{-W}{Y}$$

$$\tan \theta + \cot \theta = \frac{-Y}{W} - \frac{W}{Y} = \frac{-Y - W}{Y} = \frac{-13}{9}$$

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$$\frac{\sqrt{1 + \sin \theta_0}}{\sin \theta_0 + \sin \theta_0} = \frac{\sqrt{1 + \cos \theta_0}}{\cos \theta_0 + \sin \theta_0} = \frac{\sqrt{r} \times \cos \theta_0}{\cos \theta_0 - \sin \theta_0 + \sin \theta_0} = \frac{\cos \theta_0 \times \sqrt{r}}{r(\cos \theta_0 - 1 + \sin \theta_0)}$$

$$\frac{\cos \theta_0 \times \sqrt{r}}{r(\cos \theta_0 + \cos \theta_0 - 1)} = \frac{\cos \theta_0 \sqrt{r}}{r(\cos \theta_0 - \sin \theta_0)} = \frac{\cos \theta_0 \sqrt{r}}{r(\cos \theta_0 - \frac{\cos \theta_0}{r} \times \sin \theta_0)}$$

Y

$$\left(\frac{1 - \sin \theta_0}{\cos \theta_0} \right) \left(\frac{r \cos \theta_0 - 1}{\cos \theta_0} \right) \left(\frac{1 - \tan \theta_0}{1 + \tan \theta_0} \right) = \cos \theta_0 \times \cos \theta_0 \times \cos \theta_0$$

$$= \frac{\sin \theta_0 \cos \theta_0 \times \cos \theta_0 \times \cos \theta_0}{\sin \theta_0} = \frac{1 \times \sin \theta_0 \times \cos \theta_0}{1 \times \sin \theta_0} = \frac{1 \times \sin \theta_0}{1 \times \sin \theta_0}$$

$$= \frac{1 \times \sin \theta_0}{1 \times \sin \theta_0} = 1$$

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1.