نام و نام خانوادگی ...امیرعلی ابری...   پاسخنامه تشریحی تکلیف شماره ..۱۹.. کلاس ...دهم A...

۱	$a = \lvert 5.5m - 30h \rvert$ $5.5 \times 54 = 297.0 \rightarrow 297$ $30 \times 3 = 90$ ب) $297 - 90 = 207^\circ$
۲	$5.5 \times 18 = 99.0 \rightarrow 99$ $30 \times 6 = 180$ ب) $99 - 180 = 81$
۳	الف) $\frac{\frac{\pi}{6}}{2} \times 9 = \frac{\pi}{12} \times 9 = \frac{9\pi}{12}$ ب) $\frac{4\pi}{2 \times 6} + 6 = \frac{12+\pi}{3}$
۴	الف) $\frac{1}{2} \times 5 \times 8 \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$ ب) $CB = \sqrt{5^2 + 8^2 - 80 \times \frac{1}{2}} = \sqrt{49} = 7$ $25 + 64$, 40, $89 - 40 = 49$ $7 + 5 + 8 = 20$
۵	$\frac{15}{\frac{1}{2}} = \frac{15\sqrt{2}}{\sin B} = \frac{BA}{\sin C}$ $\sin B = \frac{\frac{15\sqrt{2}}{2}}{\frac{15}{1}} = \frac{\sqrt{2}}{2}$ $B = 45 \rightarrow \frac{\pi}{4}$, $A = 30$ $C = 105 \rightarrow \frac{7\pi}{12}$ $\frac{7\pi}{12} + \frac{3\pi}{12} = \frac{10\pi}{12} \rightarrow \frac{5\pi}{6}$

$$\frac{-\tan\alpha + 2\tan\alpha}{-\tan\alpha - \tan\alpha} \to \frac{\tan\alpha}{-2\tan\alpha} = -\frac{1}{2}$$

۶

$$a = \tan 15^\circ$$

$$\frac{2\tan 75^\circ + \tan 15^\circ}{2\tan 150^\circ - \tan 200^\circ} \to \frac{2\times\frac{1}{a} - \frac{1}{a}}{2(-a) - \frac{1}{a}} = \frac{\frac{1}{a}}{-(2a+\frac{1}{a})} = \frac{1}{2a^2+1}$$

۷

$$\frac{\sin x + \cos x}{\sin x - \cos x} + \frac{\sin x - \cos x}{\sin x + \cos x} \to \frac{2}{\sin^2 x - \cos^2 x} = \frac{2}{-(\cos 2x)} = -\frac{2}{\cos 2x}$$

$$(\sin+\cos)^2 + (\sin-\cos)^2 = 2$$

۸

$$\tan^2 x = \frac{1-\cos 2x}{1+\cos 2x}$$

$$\frac{\sin^2 x - 2\cos^2 x + 1}{\sin^2 x + 2\cos^2 x - 1} = 3$$

$$\frac{2t-2+1}{2-1} = 3 \qquad 2t-2+1 = 6-3 \Rightarrow 2t = 2\alpha - 5$$

$$\tan^2 x = \frac{\alpha(\alpha-1)}{2}$$

۹

$$\cos 112.5^\circ = \cos\frac{225^\circ}{2} = \sqrt{\frac{1+\cos 225}{2}} = \sqrt{\frac{1+\frac{\sqrt{2}}{2}}{2}} = \sqrt{\frac{2+\sqrt{2}}{4}}$$

$$\sin 67.5^\circ = \sqrt{\frac{2+\sqrt{2}}{4}}$$

۱۰