

نام و نام خانوادگی: امیرحسین (مومنی) پاسخنامه تشریحی تکلیف شماره ۱۸۱ کلاس دهم پر A

$$\text{الف) } \tan \frac{11\pi}{6} + \sin \frac{13\pi}{6} \cos \frac{13\pi}{6} = \tan 135^\circ + \sin 135^\circ \cos 135^\circ = \frac{-1}{2}$$

$$\tan(135^\circ) + \sin(135^\circ) \cos(135^\circ) = -1 + \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2}$$

جواب

$$\text{ب) } \tan \frac{13\pi}{6} \sin \frac{11\pi}{6} + \cos \frac{13\pi}{6} = \frac{-1}{\sqrt{3}} \times \frac{-\sqrt{3}}{2} - \frac{1}{2} = 0$$

$$\tan 150^\circ \times \sin 30^\circ + \cos 150^\circ$$

$$\frac{\cos}{\sin} = \varepsilon \rightarrow \cos = \varepsilon \sin \rightarrow \frac{\varepsilon \sin - \sin}{\cos + \sin} = \frac{\varepsilon \sin - \sin}{\varepsilon \sin + \sin} = \rightarrow$$

$$\frac{11 \sin}{5 \sin} = \frac{11}{5} \rightarrow \text{جواب}$$

$$\sin \alpha = 2 \cos \alpha \rightarrow \div \cos \rightarrow \tan \alpha = \frac{2 \cos}{\cos} = 2 \rightarrow \sin \alpha = 2 \text{ و } \cos = 2$$

$$\text{در مثل قائم الزامی: } \cos \alpha = \frac{1}{\sqrt{5}} \rightarrow \frac{-1}{\sqrt{5}} \rightarrow \text{جواب}$$

$$\text{الف) } \cos \frac{11\pi}{6} \cos \alpha - \sin \frac{11\pi}{6} \sin \alpha \rightarrow \frac{-\sqrt{3}}{2} \times \frac{\sqrt{3}}{10} - \frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{10} = \frac{11}{10} - \frac{3}{10} = \frac{8}{10} = \frac{4}{5}$$

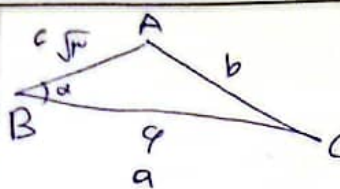
$$\frac{-11}{10} = \frac{11}{10} \rightarrow \text{جواب}$$

$$\text{ب) } \sin \frac{13\pi}{6} \cos \alpha + \sin \alpha \cos \frac{13\pi}{6} = \frac{-\sqrt{3}}{2} \times \frac{1}{\sqrt{5}} + \frac{1}{\sqrt{5}} \left(\frac{-\sqrt{3}}{2} \right) = \frac{-\sqrt{3} - \sqrt{3}}{2\sqrt{5}} = \frac{-2\sqrt{3}}{2\sqrt{5}} = \frac{-\sqrt{3}}{\sqrt{5}}$$

$$r \sin^r x + \cos^r x = \frac{\varepsilon}{r} \rightarrow \sin^r + \sin^r + \cos^r = \frac{\varepsilon}{r} \rightarrow \sin^r + 1 = \frac{\varepsilon}{r} \rightarrow \sin^r = \frac{\varepsilon}{r} - 1 \rightarrow$$

$$\sin^r = \frac{1}{r} \rightarrow \frac{1}{r} + \frac{1}{r} + \cos^r = \frac{\varepsilon}{r} \rightarrow \frac{2}{r} + \cos^r = \frac{\varepsilon}{r} \rightarrow \cos^r = \frac{r}{r}$$

$$\rightarrow \tan^r = \frac{\sin^r}{\cos^r} = \frac{\frac{1}{r}}{\frac{r}{r}} = \frac{1}{r} \rightarrow \text{جواب}$$

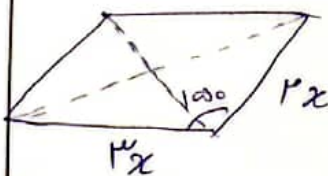


$$S_{ABC} = \frac{1}{r} \times c \times a \times \sin \alpha = \frac{1}{r} \times \sqrt{r} \times \sqrt{r} \times \sin \alpha = \epsilon / a$$

$$\sqrt{r} \times \sqrt{r} \times \sin \alpha = \epsilon / a \rightarrow \sin \alpha = \frac{\epsilon / a \times \sqrt{r}}{\sqrt{r}} = \frac{\sqrt{r}}{r}$$

$$\rightarrow \alpha = 90^\circ \leq 110^\circ \rightarrow \frac{110^\circ}{90^\circ} = \boxed{r} \rightarrow -1.2$$

6

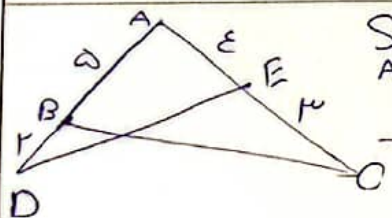


$$S = r_x \times r_x \times \sin 180^\circ = r_x \times r_x \times \frac{1}{r} = r_x^2 = a \epsilon$$

$$\rightarrow x^2 = 18 \rightarrow x = \sqrt{18} = 3\sqrt{2}$$

$$\underline{\text{المسألة}}: r(r_x + r_x) = 10x \xrightarrow{x=3\sqrt{2}} 10 \times 3\sqrt{2} = \boxed{30\sqrt{2}}$$

7

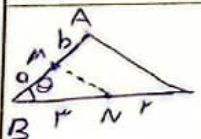


$$S_{ABO} - S_{ADE} = \frac{1}{r} \times a \times v \times \sin A - \frac{1}{r} \times \epsilon \times v \times \sin A = 1/va$$

$$\rightarrow \frac{v}{r} \sin A = 1/va \rightarrow \sin A = \frac{1}{r} \rightarrow \hat{A} = 90^\circ$$

$$\tan 10^\circ = \boxed{\frac{1}{\sqrt{3}}}$$

8



$$\frac{\frac{1}{r} (a+b) \times a \times \sin \theta}{\frac{1}{r} \times r \times a \times \sin \theta} = r$$

$$aa + ab = 9a$$

$$ab = \epsilon a \rightarrow \frac{a}{b} = \frac{a}{\epsilon} = \boxed{1/ka} \rightarrow -1.2$$

9

$$\frac{|\sin \alpha|}{\cos \alpha} = \frac{-1}{\cos \alpha} \Rightarrow \frac{|\sin \alpha|}{\cos \alpha} = \frac{-\sin \alpha}{\cos \alpha} \rightarrow |\sin \alpha| = -\sin \alpha \rightarrow \sin \alpha < 0$$

$$\frac{1}{\sqrt{\cos^2 \alpha}} - \tan \alpha = \frac{1 + \sin \alpha}{|\cos \alpha|} \rightarrow \frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{|\cos \alpha|} \rightarrow \cos \alpha > 0 \Rightarrow \frac{1 - \sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{\cos \alpha} \times 1$$

$$\textcircled{1}, \textcircled{2} \Rightarrow \sin < 0 \Rightarrow \text{موجب} \rightarrow \cos < 0 \Rightarrow \text{موجب} \rightarrow \cos \alpha < 0 \checkmark \textcircled{2}$$