

نام و نام خانوادگی: ... پاسخنامه تشریحی تکلیف شماره ۱۸... کلاس: ...

ا) $\tan\left(\frac{1}{2}\pi + \frac{1}{2}\pi\right) + \sin\left(\frac{1}{2}\pi + \frac{1}{2}\pi\right) \cos\left(\frac{1}{2}\pi + \frac{1}{2}\pi\right) = -1 + \left(-\frac{\sqrt{2}}{2}\right)\left(-\frac{\sqrt{2}}{2}\right) = -\frac{1}{2}$ (۱.۷۵)

ب) $\tan\left(\frac{1}{2}\pi - \frac{\pi}{6}\right) \sin\left(\frac{1}{2}\pi - \frac{\pi}{6}\right) + \cos\left(\frac{1}{2}\pi - \frac{\pi}{6}\right) = \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{2} + \left(-\frac{1}{2}\right) = 0$ (دقت!)

$\cot^2 \alpha + 1 = \frac{1}{\sin^2 \alpha} \Rightarrow \frac{1}{16} = \sin^2 \alpha \Rightarrow \sin \alpha = \frac{1}{4} \Rightarrow \cos \alpha = \frac{\sqrt{15}}{4}$

$\frac{\frac{1}{4} - \frac{1}{4}}{\frac{1}{4} + \frac{1}{4}} = \frac{\frac{0}{4}}{\frac{2}{4}} = 0$ (۲)

$\sin^2 \alpha + \cos^2 \alpha = 1 \Rightarrow \frac{1}{16} + \cos^2 \alpha = 1 \Rightarrow \cos^2 \alpha = \frac{15}{16} \Rightarrow \cos \alpha = \frac{\sqrt{15}}{4}$ (۲)
 $\sin \alpha = \frac{1}{4}$

ا) $\cos\left(\frac{11}{2}\pi + \alpha\right) = \cos \frac{11}{2}\pi \cos \alpha - \sin \frac{11}{2}\pi \sin \alpha = \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = \frac{2-2}{2} = 0$ (۱.۷۵)
 $= \frac{+1\sqrt{2}-1\sqrt{2}}{2} = \frac{0}{2} = 0$

ب) $\sin\left(\frac{11}{2}\pi + \alpha\right) = \sin \frac{11}{2}\pi \cos \alpha + \cos \frac{11}{2}\pi \sin \alpha = \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = \frac{2+2}{2} = 2$ (دقت!)

$\begin{cases} 2\sin^2 \alpha + \cos^2 \alpha = \frac{5}{4} \\ \sin^2 \alpha + \cos^2 \alpha = 1 \end{cases} \Rightarrow \sin^2 \alpha = \frac{1}{4} \Rightarrow \cos^2 \alpha = \frac{3}{4}$

$\frac{1}{4} = \frac{1}{4}$ (۲)



$$\frac{1}{4} \times 4 \times \sqrt{2} \times \sin \alpha = F/2$$

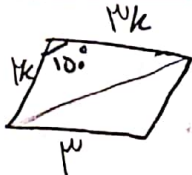
$$\sin \alpha = \frac{F/2}{4 \times \sqrt{2}} = \frac{\sqrt{2}}{4}$$

$$\Rightarrow \alpha = 14.0^\circ \quad \alpha = 4.0^\circ$$

$$\frac{14.0}{4.0} = 2 \quad \checkmark$$

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$$4k \times 10k \times \sin 10^\circ = 2F$$

$$4k^2 = 10 \Rightarrow k^2 = 10 \Rightarrow k = \sqrt{10}$$

$$2(4\sqrt{10}) + 2(10\sqrt{10}) = 12\sqrt{10} + 20\sqrt{10} = 32\sqrt{10} \quad \checkmark$$

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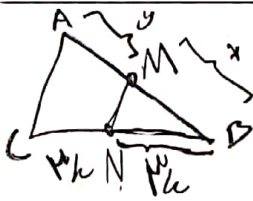
$$\frac{1}{4} \times 4 \times V \times \sin A - \frac{1}{4} \times 4 \times V \times \sin A = 1/2 V D$$

$$\sin A (1/2 D - 1/2) = 1/2 V D \Rightarrow \sin A = \frac{1}{4} \Rightarrow \cos A = \frac{\sqrt{15}}{4}$$

$$\Rightarrow \tan A = \frac{\sqrt{15}}{4} \quad \checkmark$$

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$$2BN = 2NC$$

$$S_{ABC} = 2S_{BMN}$$

$$\frac{1}{2} \times (x+y) \times 2k \times \sin B = \frac{1}{2} \times x \times y \times 2k \times \sin B$$

$$\partial x + \partial y = 9x$$

$$\partial y = 8x$$

$$\frac{BM}{AM} = \frac{8}{9} \quad \checkmark$$

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

✓ 9 mol

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