

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۱/۲ کلاس ۱۳۹۴

الف) $\frac{27}{180} = \frac{Rad}{\pi} = \frac{27}{180} \times \frac{\pi}{1} = \frac{\pi}{20}$

ب) $\frac{125}{180} = \frac{Rad}{\pi} = \frac{125\pi}{180} = \frac{25\pi}{36}$ (ج) $\frac{5\pi}{12} = \frac{D}{180} \Rightarrow D = \frac{180 \times 5}{12} = 75^\circ$

د) $\frac{D}{180} = \frac{Rad}{\pi} \Rightarrow \frac{\pi D}{180} = \frac{1}{9} \Rightarrow \frac{D}{180} = \frac{1}{9\pi} \Rightarrow D = \frac{180}{9\pi} = \frac{20}{\pi}$

$\frac{G}{200} = \frac{P}{180}$ $\frac{145a}{180} = \frac{D}{180} \Rightarrow D = \frac{145a}{2}$

$20a + 145a + 15a = 180$

$\frac{Rad}{\pi} = \frac{P}{180}$
اگر $P = 10a$

$\frac{a}{180} = \frac{D}{180} \Rightarrow D = \frac{15a}{2}$

$\frac{15a}{2} = 180 \Rightarrow a = 24$

الف) $(\frac{1}{2} \times \frac{\sqrt{3}}{2}) - (\frac{\sqrt{3}}{2} \times \frac{1}{2}) - 1 + 2 = \frac{\sqrt{3}-\sqrt{3}}{2} + 1 = 1$

ب) $(\frac{\sqrt{3}}{2})^2 + 1 + (\sqrt{3})^2 = \frac{3}{4} + 1 + 3 = \frac{13}{4}$
 $\frac{13}{4} = \frac{13}{4\sqrt{3}}$

$-(\frac{1}{2} \times \frac{1}{2}) + (\frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{2}) = -\frac{1}{4} + \frac{3}{4} = \frac{2}{4} = \frac{1}{2} = \sin^2 \theta \Rightarrow \sin \theta = \pm \frac{\sqrt{2}}{2} \Rightarrow \theta = 45^\circ, 135^\circ$

$\tan \theta = -1$

زاویه حاده است پس فقط متوازن ۴۵° $\tan \theta = 1$

$\frac{2 \times \frac{\sqrt{3}}{2} (1 - (\frac{\sqrt{3}}{2})^2)}{(1 - (\frac{\sqrt{3}}{2})^2)^2} = \frac{2 \times \frac{\sqrt{3}}{2} \times \frac{1}{2}}{(\frac{1}{2})^2} = \frac{\sqrt{3}}{\frac{1}{4}} = 4\sqrt{3} = \tan \theta \Rightarrow \theta = 76^\circ$

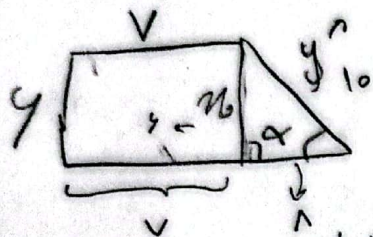
$\frac{30}{180} = \frac{Rad}{\pi} \Rightarrow Rad = \frac{\pi}{6} \Rightarrow \theta = \frac{\pi}{6}$

دایره مسطحی را بردارن

$$\frac{\sin \theta}{\cos \theta} = \frac{a}{1}$$

$$\frac{(3 \times a) - 1}{a - (1 \times 1)} = \frac{12}{1} = 12$$

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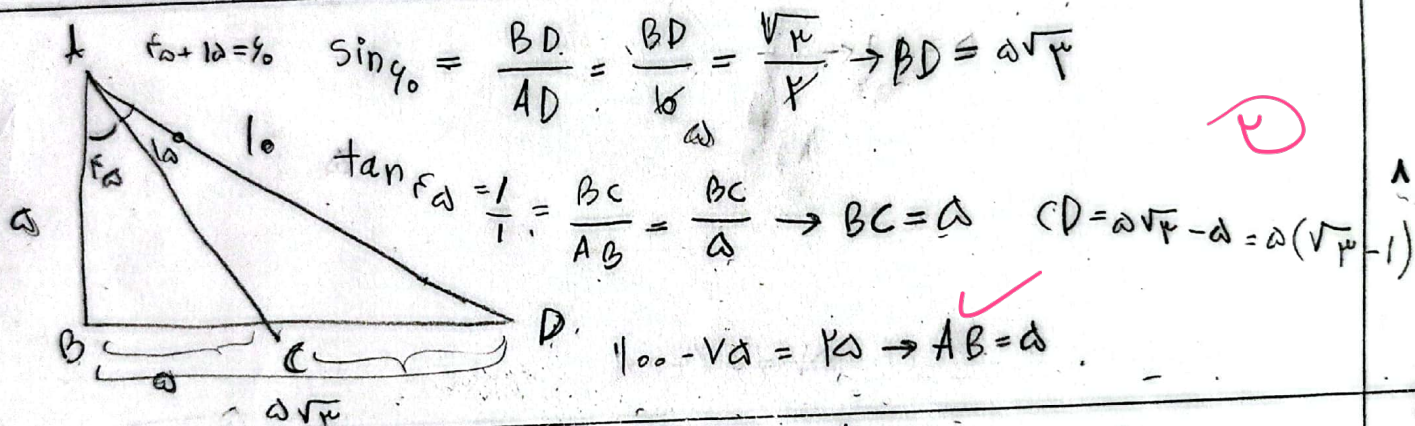


$$\frac{36}{y} = \frac{4}{10} = \frac{2}{5} \rightarrow y = 10$$

$$100 - 36 = 64 \rightarrow 8$$

$$y + v + 10 + v + 8 = 38$$

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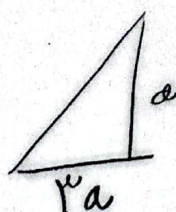
کاهش $\rightarrow \sin$ از ۰ به ۱
افزایش $\rightarrow \cos$ از ۱ به ۰

الف) $190^\circ < \theta < 270^\circ$ $\rightarrow$ کاهش $\sin$ و افزایش $\cos$

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ب) $40^\circ < \theta < 110^\circ$ $\rightarrow$ کاهش $\sin$ و افزایش $\cos$

$$\tan 36 = \frac{\sin 36}{\cos 36} = \frac{1}{3} \rightarrow \sin^2 36 + \cos^2 36 = 1$$



$$(3a)^2 + a^2 = 1$$

$$9a^2 + a^2 = 1$$

$$10a^2 = 1$$

$$a^2 = \frac{1}{10}$$

$$a = \frac{1}{\sqrt{10}}$$

$$\frac{1}{\sqrt{10}} = -\frac{\sqrt{10}}{10}$$

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