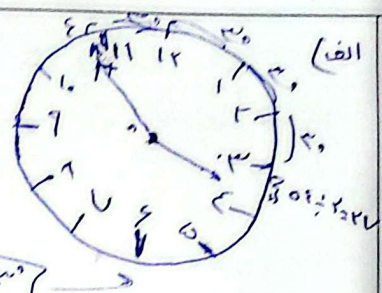


نام و نام خانوادگی روزی از پاسخنامه تشریحی تکلیف شماره ۹ ... کلاس دهم
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(ب) $|(\Delta, 0, 0) \cdot (0, 0, 1)| = 20V$

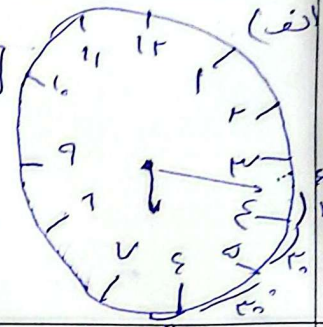
$\rightarrow 20 = 20V = 10\sqrt{3}$

$\rightarrow 10\sqrt{3} + 20V = 10\sqrt{3}$



(ب) $|0, 10, 0| = 10$

$10, 10, 10 = 10$



$\frac{10}{5} \times 10 = 20$

(ب)

$S = \frac{10}{5} \times 10 = \frac{10}{5} \times 10 = 20$

$\rightarrow 20 = 20 + 20 = 40$

$BC = \sqrt{10^2 + 10^2 - 2 \times 10 \times 10 \times \cos 60}$
 $= \sqrt{100} = 10$

$P = 10 + 10 + 10 = 30$

$S_{ABC} = \frac{1}{2} AB AC \sin 60$

$\frac{1}{2} \times 10 \times 10 \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$

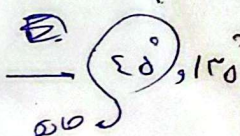
$B + C = 100$

$A = 180 - 100 = 80$

$\frac{BC}{\sin A} = \frac{AC}{\sin B} = \frac{AB}{\sin C}$

$\rightarrow C = 100 - 80 = 20$

$\frac{10}{1} = \frac{10\sqrt{3}}{\sin B} \Rightarrow \sin B = \frac{\sqrt{3}}{2}$



$\frac{100}{180} = \frac{a}{10}$

$\frac{100}{180} \times 10 = \frac{1000}{180} = \frac{100}{18}$

$$\begin{aligned}\tan(\pi - \alpha) &= -\tan \alpha \\ \tan(\pi + \alpha) &= \tan \alpha \\ \tan(\pi - \alpha) &= -\tan \alpha \\ \tan(\pi + \alpha) &= \tan \alpha\end{aligned}$$

$$\frac{-\tan \alpha + \tan \alpha}{-\tan \alpha - \tan \alpha} = \boxed{-1}$$

$$\frac{\tan(\pi - \alpha) + \tan(\pi + \alpha)}{\tan(\pi - \alpha) - \tan(\pi + \alpha)}$$

$$\frac{\tan \frac{\pi}{2} - \alpha + \tan \frac{\pi}{2} + \alpha}{\tan \frac{\pi}{2} - \alpha - \tan \frac{\pi}{2} + \alpha} = \frac{\cot \alpha - \cot \alpha}{-\cot \alpha - \cot \alpha} = \frac{\cot \alpha}{-2\cot \alpha} = \boxed{-\frac{1}{2}}$$

$$\tan 18^\circ = a \rightarrow \cot 18^\circ = \frac{1}{a}$$

$$\frac{(\sin^2 \alpha + \cos^2 \alpha)^2 + (\sin^2 \alpha - \cos^2 \alpha)^2}{\sin^2 \alpha - \cos^2 \alpha} = \frac{1}{\sin^2 \alpha - \cos^2 \alpha} = r$$

$$\sin^2 \alpha - \cos^2 \alpha = \frac{1}{r}$$

$$1 - \cos^2 \alpha - \cos^2 \alpha = \frac{1}{r} \rightarrow 1 - 2\cos^2 \alpha = \frac{1}{r} \rightarrow \cos^2 \alpha = \frac{1}{2} \left(1 - \frac{1}{r}\right)$$

$$1 + \tan^2 \alpha = \frac{1}{\cos^2 \alpha} = r \rightarrow \boxed{\tan^2 \alpha = r - 1}$$

$$\frac{\sin^2 \alpha - \cos^2 \alpha + \sin^2 \alpha + \cos^2 \alpha}{\sin^2 \alpha + \cos^2 \alpha - \sin^2 \alpha - \cos^2 \alpha} = \frac{2\sin^2 \alpha}{0} = \text{undefined}$$

$$\frac{\sin^2 \alpha - \cos^2 \alpha}{\cos^2 \alpha} = \tan^2 \alpha - 1 = -1 \rightarrow \tan^2 \alpha = 0 \rightarrow \boxed{\tan \alpha = 0}$$

$$\cos(r, \delta) = \cos\left(\frac{\pi}{2}\right) = \sqrt{1 + \frac{\sqrt{r}}{r}} = \boxed{\frac{\sqrt{r + \sqrt{r}}}{r}}$$

$$\sin\left(\frac{\pi}{2}, \delta\right) = \sin(r, \delta) = \sqrt{\frac{r + \sqrt{r}}{r}} = \boxed{\frac{\sqrt{r + \sqrt{r}}}{r}}$$