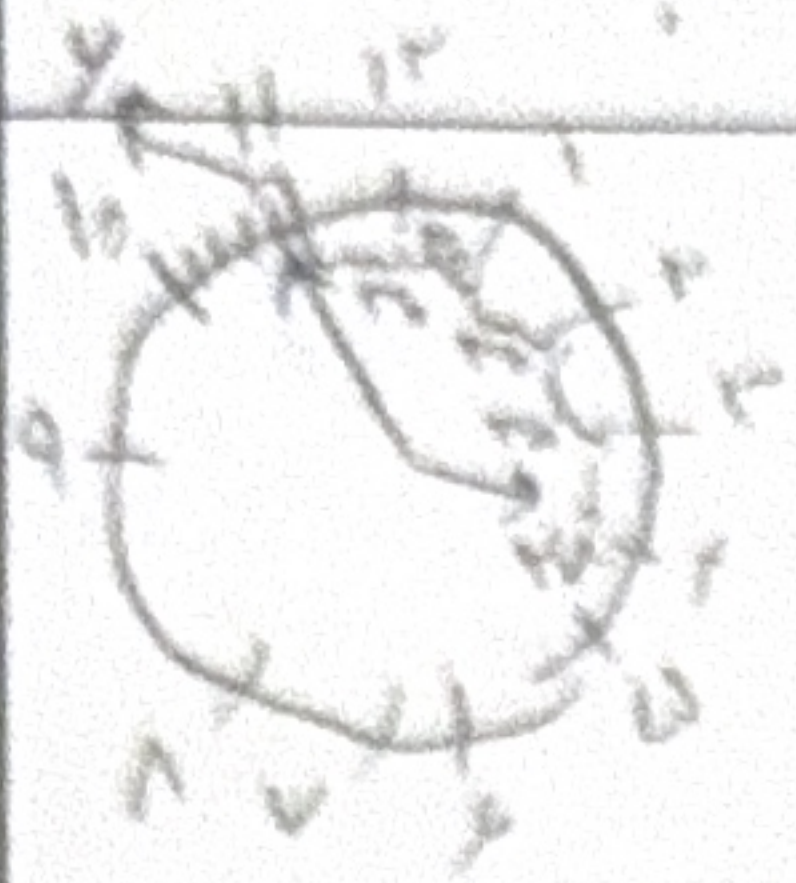


۱۴,۷۵

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پاسخنامه تشریحی تکلیف شماره ۱۹ کلاس: ریاضی پایه دهم



$$(4 \times 30) + 17 + 9 = 153$$

۱,۷۵

(الف)

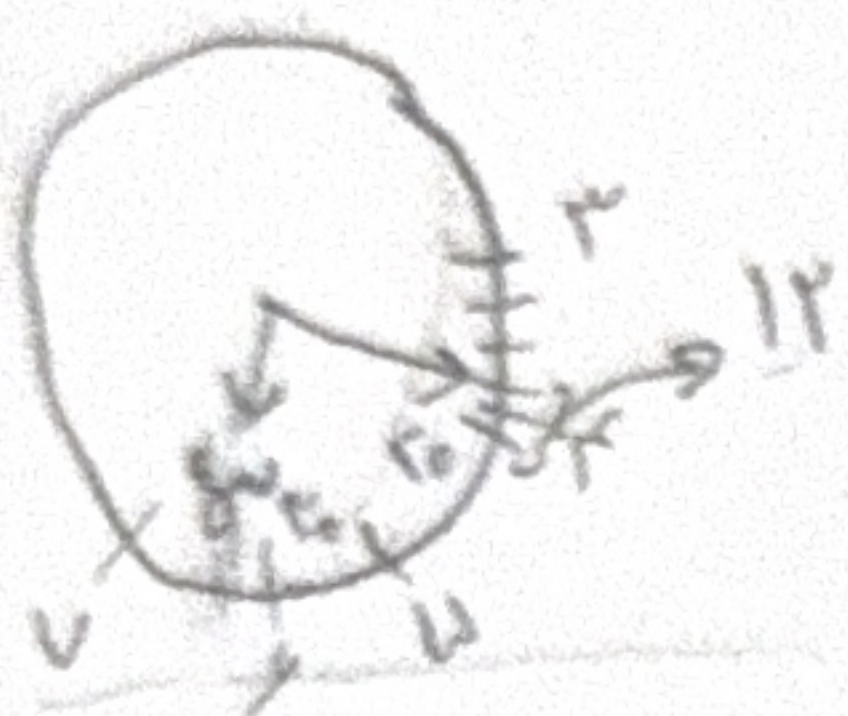
۱

هر دو زاویه می تواند باشد

$$|5,5M - 30H| \rightarrow |5,5 \times 52 - 30 \times 3| = 207$$

زاویه را باید کمتر از ۱۸۰ اعلام کنیم. $\alpha = 360 - 207 = 153$

(ب)



$$(2 \times 30) + 12 + 9 = 111$$

(الف)

۲

$$|5,5M - 30H| = |5,5 \times 18 - 30 \times 4| = 111$$

(ب)

$$S_{\text{مساحت}} = \frac{a}{r} R^2 \rightarrow \alpha \text{ بر حسب رادیان} \rightarrow \frac{\pi}{4} \times 3^2 = \frac{\pi}{12} \times 9 = \frac{9\pi}{12} = \frac{3\pi}{4}$$

۳

$$\alpha R = \frac{\pi}{4} \times 3 = \frac{\pi}{2} \rightarrow \text{محیط} = \frac{\pi}{2} + 3 + 3 = 6 + \frac{\pi}{2}$$

(ج)

$$S_{\text{مساحت}} = \frac{1}{2} \times a \times b \times \sin \alpha = \frac{1}{2} \times 5 \times 1 \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$$

(الف)

$$BC = \sqrt{25 + 49 - 2 \times \frac{1}{2} \times 50} = \sqrt{49} = 7$$

۴

$$BC = 7 \rightarrow \text{محیط} = 7 + 5 + 1 = 13$$

(ب)

$$\frac{10}{\sin A} = \frac{15\sqrt{2}}{\sin B}$$

$$\hat{B} + \hat{C} = 150 \rightarrow A = 30^\circ$$

$$\frac{10}{\frac{1}{2}} = 30 = \frac{15\sqrt{2}}{\sin B} \rightarrow \sin B = \frac{15\sqrt{2}}{30} = \frac{\sqrt{2}}{2} \rightarrow \hat{B} = 45^\circ$$

۵

$$C = 150 - 45 = 105^\circ$$

$$A = 30^\circ = \frac{\pi}{6}, B = 45^\circ = \frac{\pi}{4}, C = 105^\circ = \frac{7\pi}{12}$$

$$\frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-r \tan \alpha} = -1 \quad \checkmark$$

(r)

$$\frac{\pi}{2} = 10 = \alpha$$

$$\frac{r(\tan(\frac{\pi}{r} - \frac{\pi}{1r})) + \tan(\frac{\pi}{r} + \frac{\pi}{1r})}{r(\tan(\pi - \frac{\pi}{1r})) - \tan(\frac{r\pi}{r} - \frac{\pi}{1r})} = \frac{1}{a} = \frac{-1}{ra^r + 1} \quad \checkmark$$

(r)

$$\frac{\sin x + \cos x}{\sin x - \cos x} + \frac{\sin x - \cos x}{\sin x + \cos x} \rightarrow \div \cos = \frac{\tan + 1}{\tan - 1} + \frac{\tan - 1}{\tan + 1}$$

$$= \frac{(\tan + 1)^r + (\tan - 1)^r}{(\tan - 1)(\tan + 1)} = \frac{\tan^r + r \tan^{r-1} + \tan^r - r \tan^{r-1}}{\tan^r - 1} = \frac{r(\tan^r + 1)}{\tan^r - 1} = r$$

$$r \tan^r - r = r \tan^r + r \rightarrow \tan^r = 0 \quad \checkmark$$

(r)

1

9

$$\frac{\sin^r x - r(\cos^r x + 1)}{\sin^r x + r(\cos^r x - 1)} = r \rightarrow \div \cos^r \rightarrow \frac{\tan^r x - r + \frac{1}{\cos^r x}}{\tan^r x + r - \frac{1}{\cos^r x}} = r$$

$$\frac{r + \tan^r - 1}{1} = r \rightarrow \tan^r = \frac{a}{r} = r, a \quad \checkmark$$

(r)

$$\cos^r 2r, a = \frac{1 + \cos 4a^0}{r} = \frac{1 + \frac{\sqrt{r}}{r}}{r} = \frac{r + \sqrt{r}}{r} \rightarrow \cos^r 2r, a = \frac{\sqrt{r + \sqrt{r}}}{r} \quad \checkmark$$

(r)

$$\sin^r 4r, a = \frac{1 - \cos 4a^0}{r} = \frac{1 - (\frac{\sqrt{r}}{r})}{r} = \frac{1 + \frac{\sqrt{r}}{r}}{r} = \frac{r + \sqrt{r}}{r} \rightarrow \cos^r 2r, a = \frac{\sqrt{r + \sqrt{r}}}{r}$$

$$\sin 4r, a = \cos 2r, a \rightarrow \frac{\sqrt{r + \sqrt{r}}}{r} \quad \checkmark$$