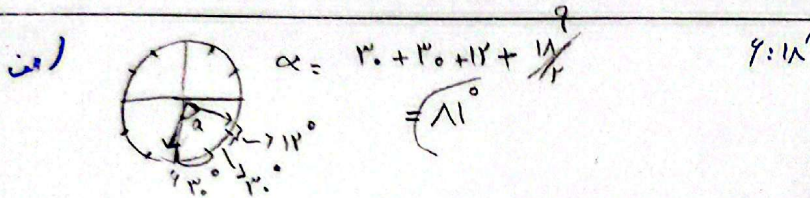


۳، ۵۴'

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ب) $|5.5 \times m - 3.0 \cdot h| = |(5.5 \times 54) - 3.0(153)| = 153$



۶:۱۸'

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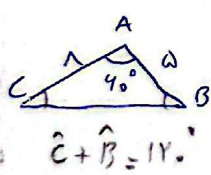
ب) $|5.5 \times m - 3.0 \cdot h| = |5.5 \times 11 - 3.0(9)| = 11^\circ$

الف) $S = R^2 \times \frac{\theta}{r} - \frac{1}{2} \times \alpha \times r^2 \rightarrow \frac{1}{2} \times \frac{\pi}{4} \times \frac{1}{r} = \frac{3\pi}{4}$



ب) $P = p_{AB} + 4cm = \frac{1}{2} \times \frac{\pi}{4} \times r + 4 = (4 + \frac{\pi}{4})$

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الف) $S_{ABC} = 1 \times 1 \times \frac{1}{2} \times \sin 40^\circ = \frac{1}{2} \times \frac{1}{2} \times \frac{\sqrt{3}}{2} = 1.0\sqrt{3}$

ب) $P_{ABC} = 1 + 1 + 1 = 3$

$1 + CB \times \frac{1}{2} = 1 \rightarrow CB \times \frac{1}{2} = 0 \rightarrow CB = 0$

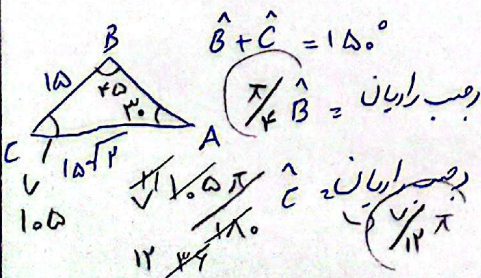
$\frac{\cos \hat{C}}{\cos \hat{B}} = \frac{1}{2}$

$(1 \times \frac{1}{2}) + CB \cos \hat{C} = 1$

$CB \cos \hat{C} = \frac{1}{2}$ و $1 \cos \hat{C} + 1 \cos \hat{B} = CB$ $\rightarrow \frac{1}{2} \times \frac{1}{2} + CB \cos \hat{B} = 1 \rightarrow CB \cos \hat{B} = \frac{1}{2}$
 $-1 \times \frac{1}{2} \cos \hat{C} - 1 \cos \hat{B} = 0$
 $CB \cos \hat{C} = \frac{1}{2}$

$1 \cos \hat{B} = CB \cos \hat{B} \rightarrow \cos \hat{B} = \frac{1}{2}$

$\frac{1.0\sqrt{3}}{1.0} = \frac{R_{ad}}{\pi}$

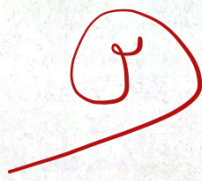


$\frac{1.0}{\sin \frac{\pi}{4}} = \frac{1.0\sqrt{2}}{\sin \hat{B}} \rightarrow \frac{1}{\frac{1}{\sqrt{2}}} = \frac{1.0\sqrt{2}}{\sin \hat{B}} \rightarrow \sin \hat{B} = \frac{1.0\sqrt{2}}{\sqrt{2}} = 1$
 $\hat{B} = 90^\circ$
 $\hat{C} = 90^\circ$

$\sin \hat{B} = \frac{\sqrt{2}}{2}$

$\hat{B} = 45^\circ$
 $\hat{C} = 45^\circ$
 $\hat{A} = 90^\circ$

$$\frac{\tan(\pi - \alpha) + r \tan(\pi + \alpha)}{\tan(r\pi - \alpha) - \tan(r\pi + \alpha)} = \frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-2 \tan \alpha} = -\frac{r}{2}$$



$\tan \frac{\pi}{r} \rightarrow 10^\circ$
 $\frac{\pi}{r} = a$
 $B = 10^\circ$

$$A = \frac{r \tan 10^\circ + \tan 10^\circ}{r \tan 10^\circ - \tan 10^\circ} = \frac{r \tan(\frac{\pi}{r} + B) + \tan(\frac{\pi}{r} + B)}{r \tan(\frac{\pi}{r} + B) - \tan(\frac{\pi}{r} + B)}$$

$$= \frac{r \tan(\frac{\pi}{r} + B) + \tan(\frac{\pi}{r} + B)}{r \tan(\frac{\pi}{r} + B) - \tan(\frac{\pi}{r} + B)} = \frac{r \tan B + \tan B}{r \tan B - \tan B} = \frac{r \tan B + \tan B}{r \tan B - \tan B}$$

$$= \frac{r \tan B + \tan B}{r \tan B - \tan B} = \frac{r \tan B + \tan B}{r \tan B - \tan B}$$

$$\frac{\sin x + \cos x}{\sin x - \cos x} + \frac{\sin x - \cos x}{\sin x + \cos x} = r \rightarrow \frac{(\sin x + \cos x)^2}{\sin^2 x - \cos^2 x} + \frac{(\sin x - \cos x)^2}{\sin^2 x - \cos^2 x}$$

$$= \frac{r}{r} = 1 \rightarrow \frac{r}{r} = 1 \rightarrow \frac{r}{r} = 1$$

$$\tan^2 x = \frac{1}{r} \times \frac{1}{r} = \frac{1}{r^2}$$

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

$$\tan^2 x = \frac{1}{r} \times \frac{1}{r} = \frac{1}{r^2}$$

جواب: $\cos(r\pi) = \cos^r \alpha = \cos^r \alpha - \sin^r \alpha \rightarrow \cos^r \alpha = \cos^r \alpha - \sin^r \alpha$

$$\frac{\sqrt{r}}{r} = r \cos^r \alpha - 1 \rightarrow r \cos^r \alpha = \frac{\sqrt{r} + r}{r}$$

$$\cos \alpha = \sqrt{\frac{\sqrt{r} + r}{r}}$$

$\sin(4\pi/5) = \sin 4\pi/5 = \cos \pi/5$

با استفاده از فرمول دوگانه