

آبشاری ۱۲

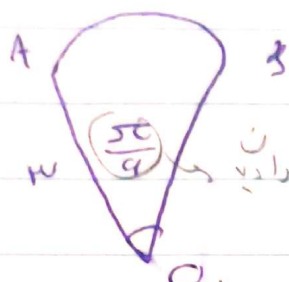
$$9 \times 54 = 486$$

$$3 \times 30 + 54 \times 0.5 = 117$$

الف

ب) لایسنس

ج) سوالات مربوط به عقده های ساعت و ساعت رانندگی



$$r = \frac{h}{\tan \theta}$$

الف

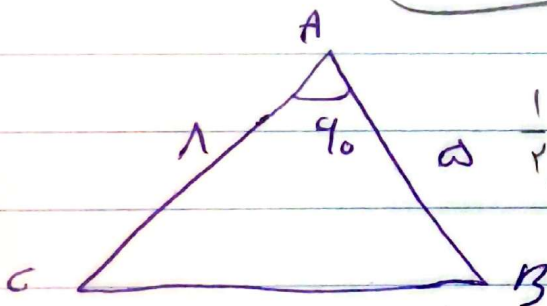
$$9 \times \frac{5\pi}{9} \times \frac{1}{2} = \frac{95\pi}{12} \times \frac{3\pi}{\pi}$$

ب

$$9 + \frac{5\pi}{9} \times \frac{1}{2} = \frac{9 + 5\pi}{2}$$

$$2r + \alpha r = \text{مساحت}$$

ج

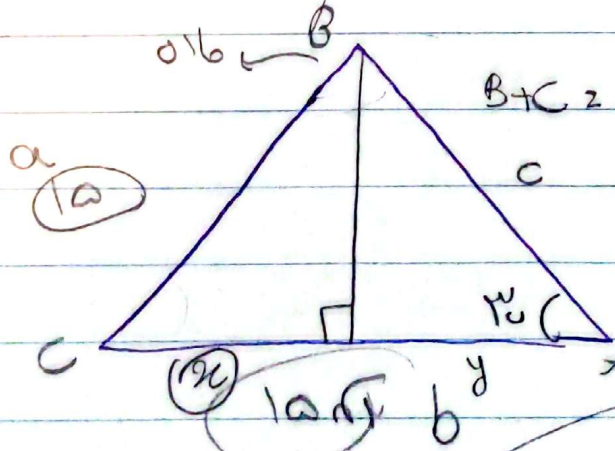


الف) مساحت ABC

$$\frac{1}{2} ab \sin 90 = \frac{1}{2} \times \frac{10\sqrt{3}}{2} \times \frac{10\sqrt{3}}{2} = 75$$

ب

$$BC + a + AP = BC^2 = \frac{1}{4} (a^2 + b^2 - 2ab \cos 90) = \frac{1}{4} (100 + 100 - 0) = 50$$



$$B + C = 150$$

ج) و ب) به این دلیل؟

$$\frac{10}{\sin B} = \frac{10\sqrt{3}}{\sin C} = \frac{10}{\sin 90} = 10$$

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

$$110 - 15 = 95$$

ب) 15

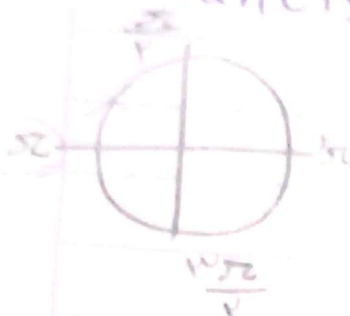
SABA

مساحت سیر

$$\tan(\pi - a) + r \cdot \tan(\pi + a)$$

9

$$\tan(\pi - a) - \tan(\pi + a)$$



$$\frac{-\tan + r \tan - r \tan}{-\tan - \tan - r \tan} = -1$$

$$z = -1$$

$$A_2 \frac{r \tan \psi + \tan(1 \cdot \omega)}{r \tan \psi - \tan \psi \omega}, \tan \frac{\pi}{12} = a - \psi$$

$$\tan z = \frac{\sin}{\cos}$$

$$A_2 - a \quad ? \quad A \quad ?$$

$$\frac{\sin + \cos}{\sin - \cos} + \frac{\sin - \cos}{\sin + \cos} = r$$

11

$$\tan z = y$$

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

$$\frac{\sinh^r x - r \cosh^r x + 1}{\sinh^r x + r \cosh^r x - 1}$$

$$= \frac{\cosh^r x - 1}{\sinh^r x} \tan^r = r$$

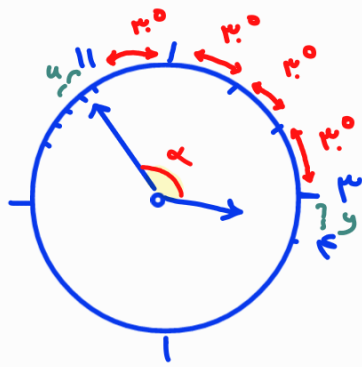
$$\cos(r \psi, \omega) \rightarrow \frac{\sqrt{r^2 + r}}{r}$$

$$\sin(r \psi, \omega)$$

$$\frac{\sqrt{r^2 + r}}{r}$$

$$\frac{\sqrt{r^2 + r}}{r}$$

$$r \psi + 4 \psi$$



$$x = 4^\circ$$

$$y = \frac{54^\circ}{r} = 27^\circ$$

$$\alpha = 4(22^\circ) + 27^\circ + 4^\circ = 153^\circ$$

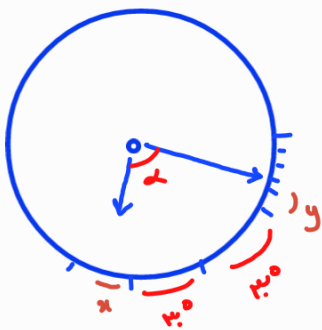
1

(الف)

$$\alpha = \left| \frac{11}{r} x \omega r - \psi(\psi) \right| = 2.7^\circ$$

باید زاویه را کمتر از 180° اعلام کنیم

$$\alpha = 34^\circ - 2.7^\circ = 153^\circ$$



$$x = \frac{11^\circ}{r} = 9^\circ$$

$$y = 2 \times 4^\circ = 12^\circ$$

$$\alpha = 2(22^\circ) + 9^\circ + 12^\circ = 111^\circ$$

2 (الف)

$$\alpha = 2(22^\circ) + 9^\circ + 12^\circ = 111^\circ$$

(ب)

$$\frac{\pi}{r} = \left(\frac{\pi}{4}\right) \times \frac{1}{r} = \frac{\pi}{r} = 12^\circ$$

$$A = \frac{r \tan\left(\frac{\pi}{r} - 12^\circ\right) + \tan\left(\frac{\pi}{r} + 12^\circ\right)}{r \tan(\pi - 12^\circ) - \tan\left(\frac{\pi}{r} - 12^\circ\right)} = \frac{r \cot 12^\circ - \cot 12^\circ}{-r \tan 12^\circ - \cot 12^\circ}$$

$$A = \frac{\cot 12^\circ}{-r \tan 12^\circ - \cot 12^\circ} \xrightarrow{\tan 12^\circ = a} \frac{\frac{1}{a}}{-ra - \frac{1}{a}} = \frac{-1}{ra^2 + 1}$$

3

$$\frac{(\sin u + c \cdot s_n)^r + (\sin u - c \cdot s_n)^r}{\sin^r u - c \cdot s_n^r} = \frac{r(\sin^r u + c \cdot s_n^r)}{\sin^r u - c \cdot s_n^r} = r \cdot \frac{1}{1}$$

$$r = r \sin^r u - r c \cdot s_n^r \rightarrow r = r(1 - c \cdot s_n^r) - r c \cdot s_n^r$$

$$4c \cdot s_n^r = 1 \rightarrow c \cdot s_n^r = \frac{1}{4} \rightarrow 1 + \tan^r u = \frac{1}{c \cdot s_n^r} \rightarrow \tan^r u = \Delta$$

$$\sin^r u - r c \cdot s_n^r + 1 = r \sin^r u + r c \cdot s_n^r - r$$

$$r \sin^r u + r c \cdot s_n^r + r c \cdot s_n^r = \Delta \rightarrow c \cdot s_n^r = \frac{r}{v}$$

$$1 + \tan^r u = \frac{1}{c \cdot s_n^r} \rightarrow \tan^r u = \frac{r}{v} - 1 = r \cdot \Delta \leq \frac{\Delta}{r}$$