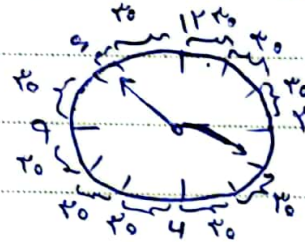


☆ ١٩,٥ آفرین

Subject: حساب معین

Year: Month: Day:

کدملی = الف



$$r: \omega r$$

$$r_0 \times \omega = 120$$

$$\omega r: r = 2V$$

$$2V - \omega r = 1$$

$$120 + 2V + \omega r = 103$$

د

$$a = \left| \frac{\omega}{\omega M} - r_0 H \right| = 4 \left| \frac{\omega}{\omega \times \omega r} - \frac{r_0 \times \omega}{90} \right| = 4 \times 20V$$

$$r_0 - 20V = 103$$



$$a = \frac{\pi}{4}$$

$$\frac{\pi}{4} = \frac{\pi}{r}$$

$$\frac{a}{r} = \frac{\pi}{r^2}$$

$$\frac{a}{r} \times r^2 = \frac{\pi}{r} = 150$$

مسئله 3

الف

د

$$|AB| = ar = 4 \times \frac{\pi}{4} = \pi$$

$$|AB| = \frac{\pi}{r} = 2r + AB = 4 + \frac{\pi}{r}$$

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

← 9 سوال ✓

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

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

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

tan x

← 1 سوال ✓

$$\sin^2 x + \cos^2 x + r \sin x \cos x + \sin^2 x + \cos^2 x - r \sin x \cos x$$

$$\sin^2 x - \cos^2 x$$

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

$$\sin^2 x = 1 - \cos^2 x \quad r - r \cos^2 x = r \quad r \cos^2 x = 1$$

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

$$\tan x = \frac{\sin x}{\cos x} = \frac{\sqrt{\frac{r-1}{r}}}{\frac{1}{r}} = \sqrt{r(r-1)}$$

$$\text{الف) } \cos(x, a)$$

$$\cos x = r \cos^2 x - 1$$

$$\cos^2 x = r \cos^2 x - 1$$

$$\cos^2 x = \frac{r}{r}$$

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

$$r \cos^2 x = \frac{r+r}{r}$$

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

$$\text{ب) } \sin(4V, a)$$

$$\cos^2 x = r \cos^2 x - 1$$

$$\sin^2 x = \cos^2 x$$

$$\cos^2 x = r \cos^2 x - 1$$

$$\text{Arman } \frac{r}{r} = r \cos^2 x - 1 \quad \cos^2 x = \frac{r+r}{r} \quad \cos x = \frac{\sqrt{r+r}}{r}$$

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

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

سؤال 4 ✓

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

$$\cos^2 \alpha = 1 - \sin^2 \alpha \quad -r(1 - \sin^2 \alpha) = -r + \sin^2 \alpha$$

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

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

$$\frac{r}{\cos^2 \alpha} - \frac{r \cos^2 \alpha}{\cos^2 \alpha} = e \quad \frac{r}{\cos^2 \alpha} = v \quad \frac{1}{\cos^2 \alpha} = \frac{v}{r} \quad \cos^2 \alpha = \frac{r}{v}$$

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

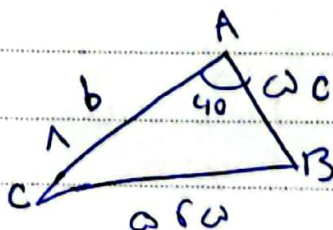
$$a) \quad r(10) + r(40) + 9 = 11$$



سؤال 2 ✓
9:10

$$b) \quad a = |a \omega M - r_0 H| = |a \omega \times 11 - r_0 \times 9| = 5$$

$$|11 \times \frac{11}{10} \times \frac{11}{10} - r_0 \times 9| = 5 \quad |99 - 110| = 5 \quad 11$$



$$\frac{a \times A \times \frac{1}{2} \times \sin 40}{\frac{1}{2} \times b \times c} = \frac{1063}{10}$$

سؤال 4 ✓
(cell)

$$BC = \sqrt{c^2 + b^2 - 2bc \cos 90}$$

$$= \sqrt{r^2 + 4r^2 - 2 \times \frac{1}{2} \times r^2} = \sqrt{10 + 8} = \sqrt{18} = 1.8$$

$$a \omega = 5 \quad b \omega = 13 + a \omega$$

$$r \omega + 4r - r = 4r$$

Arman

Subject:

Year: Month: Day:

page: ()

$$\tan \frac{\pi}{12} = a$$

$$\frac{\pi}{12} = \frac{1}{12}$$

$$\frac{\pi}{12} = \frac{1}{12}$$

$$\alpha = 12$$

$\Leftarrow V$

$$\tan 12^\circ = a$$

$$r \tan \left(\frac{\pi}{12} - \frac{12}{12} \right) + \tan \left(\frac{\pi}{12} + \frac{12}{12} \right) + r \cot a + \cot a = 4 \cot a$$

$$r \tan \left(\frac{\pi}{12} - \frac{12}{12} \right) - \tan \left(\frac{\pi}{12} - \frac{12}{12} \right) - r \tan a + \cot a$$

$$\sin a \cos a + \cos a \sin a + r \sin a$$

$$\sin a \cos a + \cos a \sin a + r \sin a$$

$$\sin a \cos a + \cos a \sin a + r \sin a$$

$$\sin a \cos a + \cos a \sin a + r \sin a$$

$$\sin a \cos a + \cos a \sin a + r \sin a$$

$$\sin a \cos a + \cos a \sin a + r \sin a$$

$$\cot 12$$

$$r \tan 12 - \cot 12$$

$$\frac{1}{a} = 4 - r a^2 - 1$$

$$r a - \frac{1}{a}$$

$$-r a^2 - 1$$

Arman

$$B+C=120$$

$$=4\hat{A}=120 \quad AC=10\sqrt{3} \quad BC=10$$

$$B+C=90$$

$$C=120-B$$

$$C=120-(B_1+B_r)$$

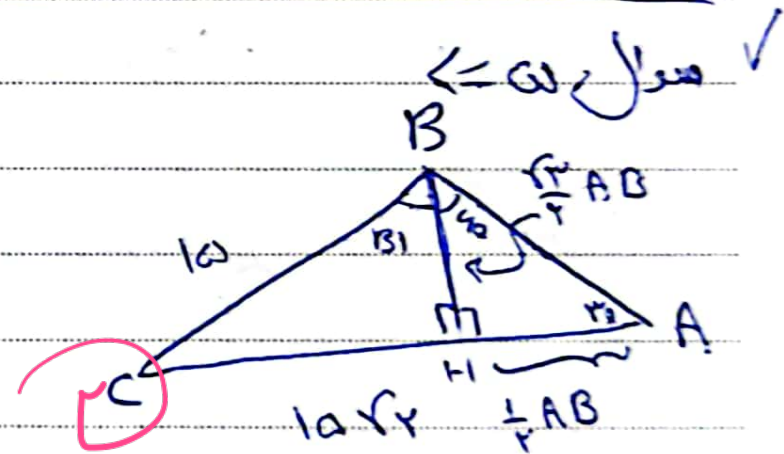
$$C=90-B_r$$

$$\frac{AC}{\sin B} = \frac{BC}{\sin A} \quad \frac{10\sqrt{3}}{\sin B} = \frac{10}{\frac{1}{2}} = 20 \sin B = \sqrt{3} \quad B=60^\circ$$

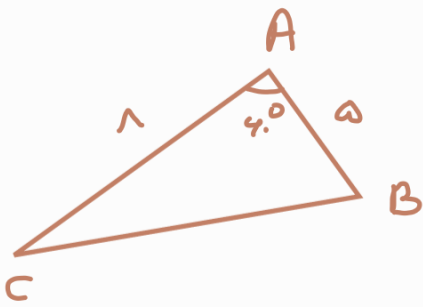
$$120-60=60^\circ$$

$$\boxed{A=60^\circ = \frac{\pi}{3}} \\ B=$$

$$\boxed{\cancel{120} = C = \frac{\pi}{2}}$$



Arman



$$S_{ABC} = \frac{1}{2} \times (2)(1) \times \sin 40^\circ$$

✓

$$S_{ABC} = \frac{1}{2} \times 4 \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$$

$$BC^2 = 2^2 + 1^2 - 2(2)(1)(\cos 40^\circ)$$

$$BC^2 = 4 + 1 - 4 \cos 40^\circ = 49 \rightarrow BC = 7$$

$$P_{ABC} = 2 + 1 + 7 = 10$$

طبق قضیه سینوس ها سه