

$$\tan \frac{11\pi}{8} + \sin \frac{15\pi}{8} \cos \frac{19\pi}{8}$$

$$-1 + \left(-\frac{\sqrt{2}}{2}\right) \times \left(-\frac{\sqrt{2}}{2}\right) = -1 + \frac{1}{2} = -\frac{1}{2}$$

$$\tan \frac{17\pi}{8} \sin \frac{11\pi}{8} + \cos \frac{19\pi}{8}$$

$$-\frac{\sqrt{2}}{2} \times -\frac{\sqrt{2}}{2} + \left(-\frac{1}{2}\right) = \frac{1}{2} - \frac{1}{2} = 0$$

$$\frac{3 \cos \alpha - \sin \alpha}{\cos \alpha + \sin \alpha} \div \sin \alpha$$

$$\frac{3 \cos \alpha - \sin \alpha}{\cos \alpha + \sin \alpha} \div \sin \alpha$$

$$\frac{3 \cot + 1}{\cot + 1} = \frac{3 \times 2 - 1}{2 + 1} = \frac{5}{3}$$

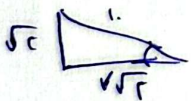
$$\sin \alpha = r \cos \alpha$$

$$\rightarrow r \cos^2 \alpha + \cos^2 \alpha = 1 \Rightarrow 4 \cos^2 \alpha = 1 \Rightarrow \cos^2 \alpha = \frac{1}{4}$$

$$\cos \rightarrow \begin{cases} +\frac{\sqrt{2}}{2} \\ -\frac{\sqrt{2}}{2} \end{cases}$$

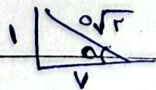
$$\cos \frac{11\pi}{8} \cdot \cos \alpha - \sin \frac{11\pi}{8} \cdot \sin \alpha = -\frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2}$$

$$\frac{\sqrt{2}}{2} - \frac{1}{2} = \frac{5}{2}$$



$$\sin \frac{19\pi}{8} \cdot \cos \alpha + \sin \alpha \cdot \cos \frac{19\pi}{8} \Rightarrow -\frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} + \frac{1}{2} \times -\frac{\sqrt{2}}{2}$$

$$-\frac{\sqrt{2}}{2} - \frac{1}{2} = -\frac{3}{2}$$



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

$$\cos^2 \alpha = \frac{r}{2} \Rightarrow 1 + \tan^2 \alpha = \frac{r}{2} \Rightarrow \tan^2 \alpha = \frac{1}{2} \Rightarrow \tan \alpha = \frac{1}{\sqrt{2}}$$

Y

$$\frac{1}{r} \times \sqrt{r} \times \sqrt{r} \times \sin \alpha = \frac{r}{r} \Rightarrow \sin \alpha = \frac{r}{r\sqrt{r}} = \frac{\sqrt{r}}{r} \Rightarrow \alpha = 60^\circ \text{ و } 120^\circ$$

$$\frac{120}{5} = 7$$

(7)

✓

$$\frac{1}{r} \times r \times r \times \sin 100^\circ = 0.7 \Rightarrow r \times r = 0.7 \Rightarrow r = 0.84$$

(0.84)



$$r_1 = 12, r_2 = 18 \Rightarrow \text{مساحت} = r_1 r_2 \sin \alpha = 9$$

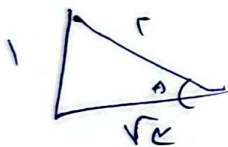
$$S = 2 \left(r_1 \times r_2 \times \frac{1}{r} \times \sin \frac{\alpha}{2} \right) = 2 \times 12 \times 18 \times \frac{1}{r} \times \frac{1}{r} = 12r^2 = 54 \Rightarrow r = 3\sqrt{2}$$

$$P = (r_1 + r_2) r = 10r = 10(3\sqrt{2}) = 30\sqrt{2}$$

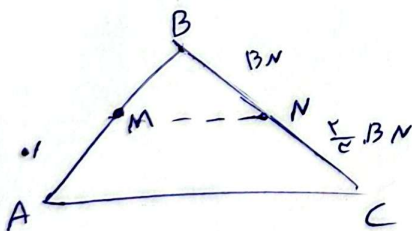
$$\frac{1}{r} \times \sin A \times r \times r = \frac{1}{r} \times \sin A \times r \times r$$

$$\Rightarrow \frac{1}{r} \times \sin A \times r = 1 \Rightarrow \sin A = \frac{1}{r}$$

(1)



$$\Rightarrow \tan A = \frac{1}{r} = \frac{\sqrt{2}}{2}$$



$$\frac{1}{r} \times \sin B \times \frac{r}{2} \times \frac{r}{2} \times \frac{r}{2} = \frac{r}{2}$$

$$\frac{1}{r} \times \sin B \times \frac{r}{2} \times \frac{r}{2} \times \frac{r}{2} = \frac{r}{2}$$

$$\frac{r}{2} \times AB = r \times BM \Rightarrow$$

$$AB = 2BM \Rightarrow AB = 1.18BM$$

$$AM + BM = 1.18BM \Rightarrow AM = 0.18BM \Rightarrow \frac{BM}{AM} = \frac{1}{0.18} = 5.56$$

$$\frac{1}{\sqrt{\cos^2 \theta}} - \frac{\sin}{\cos} = \frac{1 + \sin}{\cos} \Rightarrow \cos < 1$$

(1.18)

$$\frac{|\sin|}{\cos} = - \frac{\sin}{\cos} \Rightarrow \sin < 0$$

سوم
(1/2 = 0.5)