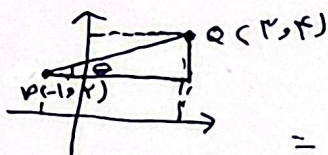


روش اول: $S = r \times \frac{1}{r} \times r \times r \sin 135^\circ = r \times r \times \frac{1}{r} = r$ روش دوم: مستقیم

ب) $S = ab \sin \alpha = r \times r \times \frac{1}{r} = r$



$\cos \theta = \frac{\text{مجاور}}{\text{مقدار}} = \frac{|x - (-1)|}{\sqrt{(x - (-1))^2 + (y - 1)^2}} = \frac{r}{\sqrt{r^2 + 14}} = \frac{r}{\sqrt{r^2 + 14}}$

$mb = r \cdot d(-r - \sqrt{r}) = -r - r\sqrt{r}$

$y = mx + b$

$-r = r \cdot d$

$r \cdot d = r \cdot d$

$b = r \cdot d + d \cdot \ln 10^0 = -r - r\sqrt{r}$

$m = \tan 10^\circ = -\frac{(r + \sqrt{r})}{r} = -r - \sqrt{r}$

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

$\cos^2 \alpha = \frac{1 + \cos 2\alpha}{2} \rightarrow \cos^2 10^\circ = \frac{1 + \cos 20^\circ}{2} = \frac{1 + (-\frac{\sqrt{r}}{r})}{2} = \frac{1 - \frac{\sqrt{r}}{r}}{2}$

$\frac{r - \sqrt{r}}{r} = \frac{r - \sqrt{r}}{r} = \frac{r - \sqrt{r}}{r} \Rightarrow \cos \alpha = \frac{r - \sqrt{r}}{r}$

$f(x) = \cos(\frac{14\pi}{r} + x) + \sin(\frac{10\pi}{r} - x) - \tan(\frac{14\pi}{r} + x)$

$f(\frac{8\pi}{9}) = 1 - \cos x + \cos x - (-\cot x) = \cot x$

$f(\frac{8\pi}{9}) = \cot(\frac{8\pi}{9}) = \cot 10^\circ = \sqrt{r}$

$\sin(\frac{14\pi}{r} + x) + \cos(\frac{10\pi}{r} - x)$

$\cos(\frac{14\pi}{r} + x) - \sin(\frac{10\pi}{r} - x)$

$\frac{14\pi}{r} = \frac{14\pi}{r} + \frac{\pi}{r} = 14\pi + \frac{\pi}{r}$

$\frac{10\pi}{r} = \frac{10\pi}{r} + \frac{\pi}{r} = 10\pi + \frac{\pi}{r}$

$\cos x + (-\sin x)$

$\frac{\cos x - \sin x}{-\cos x - (-\sin x)} = \frac{\cos x - \sin x}{-\cos x + \sin x} = -1$