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$$\text{ج) } S = ab \sin \alpha : r \times r \times \frac{\sqrt{r}}{r} = 4\sqrt{r}$$

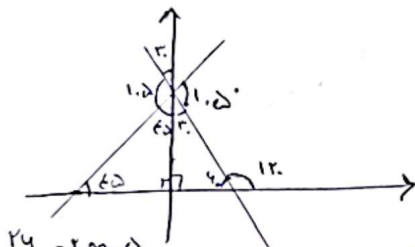
$$\text{ب) } S = \frac{1}{r} \times ab \sin \alpha : r \times r \times \frac{\sqrt{r}}{r} \times \frac{1}{r} = r\sqrt{r}$$

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

$$\frac{1}{\cos^2 \theta} = \tan^2 \theta + 1$$

$$\frac{1}{r+1} = \frac{\Delta}{r} \rightarrow \cos^2 \theta = \frac{r}{\Delta}$$

$$\cos \theta = \frac{r}{\sqrt{\Delta}} = \frac{r\sqrt{2}}{\Delta}$$



$$\begin{cases} y = \sqrt{r}x + b \\ y = x + \frac{\Delta}{r} \end{cases} \rightarrow b = \frac{\Delta}{r}$$

$$\begin{aligned} ry &= r \cdot m + b \\ y &= m + \frac{\Delta}{r} \\ \tan \theta &= 1 \end{aligned}$$

$$y = mx + b \Rightarrow m = \tan \theta = \sqrt{r}$$

$$mb = \frac{\Delta}{r} \times \sqrt{r} = \frac{\Delta\sqrt{r}}{r}$$

$$f(m) = -\cos(m) + \cos(m) - (\cot(m)) \rightarrow f(m) = \cot(m)$$

$$f\left(\frac{\Delta\pi}{4}\right) = \cot\left(\frac{\Delta\pi}{4}\right) = \sqrt{r}$$

$$\frac{\sin\left(\frac{\pi}{r} + m\right) + \cos\left(\frac{\pi}{r} - m\right)}{\cos(\pi + m) - \sin(\pi - m)}$$

$$= \frac{+\cos(\pi) - \sin(\pi)}{-\cos(m) + \sin(m)}$$

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

$$\cos(\pi + m) - \sin(\pi - m) = -\cos(m) + \sin(m)$$

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

$$-1$$