

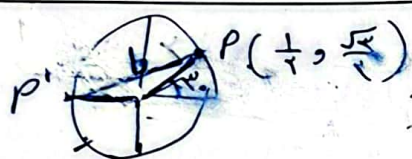
$$\frac{a \sin(\pi + \frac{\pi}{4}) + b \cos(\pi + \frac{\pi}{4})}{a \sin(\frac{\pi}{4} + \frac{\pi}{4}) + b \cos \frac{\pi}{4}} = \frac{-\frac{a\sqrt{2}}{2} - \frac{b\sqrt{2}}{2}}{-\frac{a}{2} + \frac{b}{2}} = -\frac{\sqrt{2}}{2}$$

$$-\frac{\sqrt{2}}{2}a - \frac{\sqrt{2}}{2}b = \frac{\sqrt{2}}{2}a - \frac{\sqrt{2}}{2}b$$

$$-\sqrt{2}b = \sqrt{2}a \Rightarrow \frac{b}{a} = -1 \checkmark$$

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$$P = \sqrt{2 + \sqrt{2}} \checkmark$$

$$b = \sqrt{2 - 2x - \frac{\sqrt{2}}{2}} = \sqrt{2 + \sqrt{2}}$$

$$\cos 150^\circ = -\frac{\sqrt{3}}{2}$$

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$$\frac{1}{9} = \frac{2}{9}$$

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$$\alpha = \left| \frac{11M}{2} - 90^\circ \right|$$

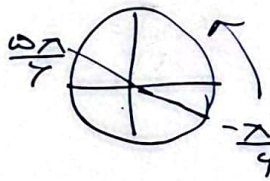
$$90^\circ = \left| \frac{11M}{2} - 90^\circ \right|$$

$$\frac{11M}{2} - 90^\circ = 90^\circ \Rightarrow M = 20$$

$$\frac{11M}{2} - 90^\circ = -90^\circ \Rightarrow M = 12, \dots$$

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$$-\frac{1}{2} < \frac{m-3}{5} \leq 1 \Rightarrow \frac{5}{2} < m-3 \leq 12$$

$$\frac{1}{2} < m \leq 15$$

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$$\sin\left(\frac{\pi}{4} + \omega\right) + k \cos\left(\frac{\pi}{4} - \omega\right)$$

$$= \frac{\cos \omega - k \sin \omega}{-\cos \omega - \cancel{r} \sin \omega} = \frac{\sin \omega}{\cos \omega} = \tan \omega$$

$$\cos(\pi - \omega) + r \sin(\pi + \omega)$$

$$\frac{1 - k \tan \omega}{-1 - r \tan \omega}$$

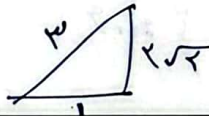
$$= \frac{-1 - k \tan \omega}{-1 - r \tan \omega} = r \Rightarrow k = r$$

$$\frac{-k}{r} = \frac{-r}{r} \Rightarrow k = r$$

$$\frac{\cot \pi + \cot \pi}{\tan \pi - r \tan \pi - \tan \pi} = \frac{r \cot \pi}{-\tan \pi} = \frac{-\sqrt{r}}{+r\sqrt{r}} = -\frac{1}{r}$$

$$\frac{1 - \cos \pi}{1 + \cos \pi} = r \Rightarrow r + r \cos \pi = 1 - \cos \pi \Rightarrow r \cos \pi = -1$$

$$\cos \pi = -\frac{\sqrt{r}}{r} \quad \tan = -\sqrt{r}$$



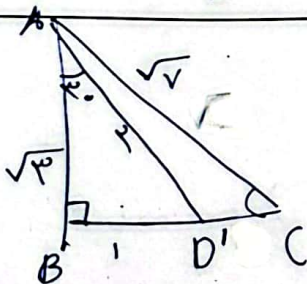
$$\cos \pi = -\frac{1}{r}$$

$$A \quad \frac{1 \cdot \pi}{1 \cdot \pi} = \frac{\pi}{\pi} = \pi = \frac{\pi}{\omega} \quad \frac{\pi}{\omega} r = L$$

$$B \quad \frac{a \pi}{1 \cdot \pi} \times r' = L$$

$$\frac{a \pi}{1 \cdot \pi} r' = \frac{\pi}{\omega} r \Rightarrow \frac{r_A}{r_B} = \frac{a}{r}$$

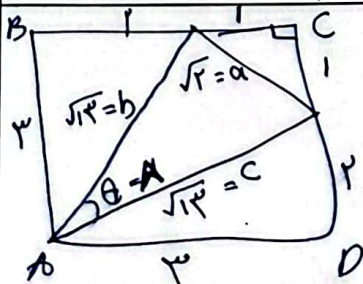
$$\frac{S_A}{S_B} = \frac{\pi r_A^2}{\pi r_B^2} = \frac{a}{r}$$



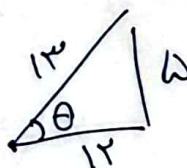
$$S = \frac{1}{2} \sin \pi \times AB \times BC = \frac{1}{2} \times \sqrt{r} \times r = \frac{\sqrt{r}}{2} \quad BC = r$$

$$\sin \pi = r \sin \pi \cos \pi = r \times \frac{\sqrt{r}}{r} \times \frac{r}{\sqrt{r}} = \frac{\sqrt{r}}{r}$$

$$\sin \pi = \frac{\sqrt{r}}{r} \quad \cos \pi = -\frac{r}{\sqrt{r}}$$



$$\cos \theta = \frac{b^2 + c^2 - a^2}{2bc} = \frac{r^2 + 1 - r}{2r} = \frac{1}{r}$$



$$\sin \theta = \frac{r}{\sqrt{r}}$$