1사분면의 각 θ 가 있을 때 $\frac{\theta}{2}$가 위치하는 사분면은?

(If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?)

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

▸ Start ▸ End

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▸ Start ▸ End

Let

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

▸ Start ▸ End

$$Let\ \theta =$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

▸ Start ▸ End

$$Let\ \theta = 2n\pi + \theta_0$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

▸ Start ▸ End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} =$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} =$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} \end{cases}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} 2m\pi + \frac{\theta_0}{2} \\ \end{cases}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} 2m\pi + \frac{\theta_0}{2} & , if\ n = 2m \\ \\ \end{cases}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} 2m\pi + \frac{\theta_0}{2} & , if\ n = 2m \\ 2m\pi + \pi + \frac{\theta_0}{2} \end{cases}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} 2m\pi + \frac{\theta_0}{2} & , if\ n = 2m \\ 2m\pi + \pi + \frac{\theta_0}{2} & , if\ n = 2m+1 \end{cases}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} 2m\pi + \frac{\theta_0}{2} & , if\ n = 2m \\ 2m\pi + \pi + \frac{\theta_0}{2} & , if\ n = 2m+1 \end{cases}$$

$$\therefore \frac{\theta}{2}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

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$$\therefore \frac{\theta}{2} \text{ lies in}$$

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Start End

$$Let\ \theta = 2n\pi + \theta_0 \quad (0 < \theta_0 < \frac{\pi}{2},\ n \in \mathbb{Z})$$

$$\frac{\theta}{2} = n\pi + \frac{\theta_0}{2} = \begin{cases} 2m\pi + \frac{\theta_0}{2} & , if\ n = 2m \\ 2m\pi + \pi + \frac{\theta_0}{2} & , if\ n = 2m+1 \end{cases}$$

$\therefore \frac{\theta}{2}$ lies in the 1st or 3rd quadrant.

If the angle θ lies in 1st quadrant, where $\frac{\theta}{2}$ lies in?

Github:
https://min7014.github.io/math20230506001.html

Click or paste URL into the URL search bar, and you can see a picture moving.