

شماره تکلیف: 14

دقیق، یازدهم سپهر

نظم و نظم خانوادگی، امیدهای بسیاری

1)
$$\lim_{x \rightarrow 0} \frac{1}{x} = \infty$$

$$x \rightarrow 0^+ \Rightarrow \frac{1}{x} \rightarrow \infty$$

2)
$$\lim_{x \rightarrow 0} \frac{1}{x^2} = \infty$$

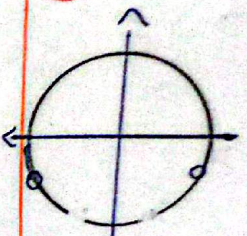
3)
$$\lim_{x \rightarrow 0} \frac{1}{x^3} = \infty$$

4)
$$\lim_{x \rightarrow 0} \frac{1}{x^4} = \infty$$

5)
$$\lim_{x \rightarrow 0} \frac{1}{x^5} = \infty$$

6)
$$\lim_{x \rightarrow 0} \frac{1}{x^6} = \infty$$

7)
$$\lim_{x \rightarrow 0} \frac{1}{x^7} = \infty$$



$$D_n = \left(\sqrt{\frac{n}{2}} + \frac{\pi}{2}, \sqrt{\frac{n}{2}} - \frac{\pi}{2} \right)$$

$$\frac{\pi}{2} < \cos \theta < 1 + \cos \theta$$

$$D_0 = \left[\frac{\pi}{2}, \frac{3\pi}{2} \right]$$

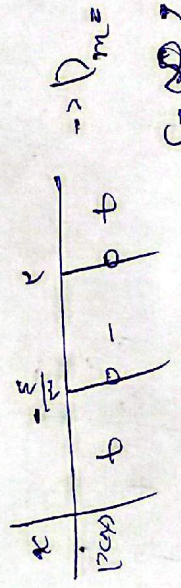
1 1 1 1 1 1 1 1 1 1

$$\cos \theta = \frac{1}{2} \Rightarrow \theta = \frac{\pi}{3}, \frac{5\pi}{3}$$

$$\cos \theta = -\frac{1}{2} \Rightarrow \theta = \frac{2\pi}{3}, \frac{4\pi}{3}$$

$$\cos \theta = \frac{\sqrt{3}}{2} \Rightarrow \theta = \frac{\pi}{6}, \frac{11\pi}{6}$$

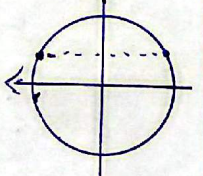
$$D = \left(\frac{\pi}{6}, \frac{5\pi}{6} \right) \cup \left(\frac{7\pi}{6}, \frac{11\pi}{6} \right)$$



$$D = \left\{ x \in \mathbb{R} \mid x \neq \frac{\pi}{2}, \frac{3\pi}{2} \right\}$$

100%

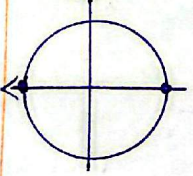
$$\cos \theta = \frac{1}{2} \Rightarrow \theta = \frac{\pi}{3}, \frac{5\pi}{3}$$



$$D = \left(\frac{\pi}{3}, \frac{5\pi}{3} \right)$$

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100%

$$D = \left(\frac{\pi}{3}, \frac{5\pi}{3} \right)$$

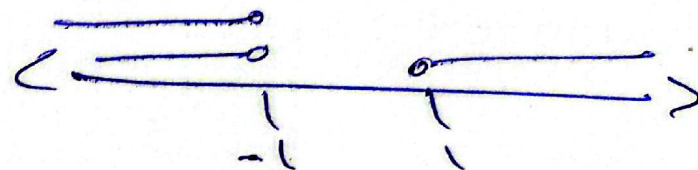
$$\cos \theta = \frac{1}{2} \Rightarrow \theta = \frac{\pi}{3}, \frac{5\pi}{3}$$

$$\frac{x-1}{x+1} > 0 \quad \begin{array}{c|cc} x & -1 & 1 \\ \hline p(x) & + & - \end{array} \Rightarrow x < -1, x > 1$$

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$$\log_{10} \frac{x-1}{x+1} > 0 \Rightarrow \frac{x-1}{x+1} > 1 \Rightarrow \frac{x-1-x-1}{x+1} > 0 \Rightarrow \frac{-2}{x+1} > 0$$

$$\begin{array}{c|c} x & -1 \\ \hline p(x) & - \end{array} \Rightarrow x < -1$$



$$D_1 = (-\infty, -1]$$