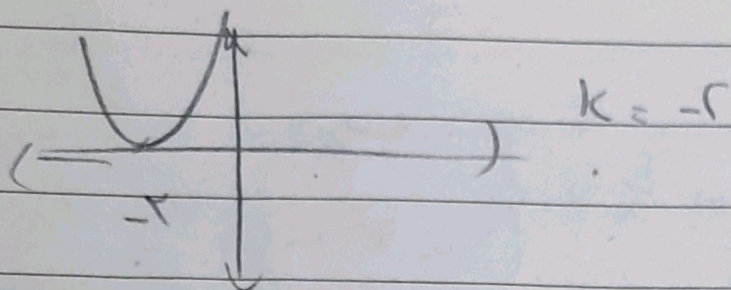


$$(x^3)^3 - 1 = x^9 + 9x^6 + 27x^3 + 9 - 1 = x^9 + 9x^6 + 27x^3 + 8$$

✓



$$\frac{1}{\sqrt{n}} \rightarrow f(n) \leq \sqrt{n} \Rightarrow n + \sqrt{n} - 1 \leq \sqrt{n}$$

①

$$n-1 \leq 0 \rightarrow n \leq 1$$

$$D_f = [1, +\infty)$$

$$\Rightarrow 1, 2$$

$$\left(\frac{1}{\sqrt{n}} \right)$$

$$\cos \alpha = 0 \rightarrow r^{-1} - r^1 = -1, \omega \Rightarrow [-1, \omega, \infty)$$

②

$$\cos \alpha = 1 \rightarrow r^2 - r^{-2} = 3, \omega$$

$$3, \omega - (-1, 0) = \omega, \omega$$

$$R_f = (-2, -1) \Rightarrow n = -2 \Rightarrow \frac{r^{-2} - r^2}{r} = \frac{-1}{n}$$

③

$$n = -1 \rightarrow \frac{r^{-1} - r^1}{r} = \frac{-r}{r} \rightarrow R_{gef} = \left[-\frac{\omega}{n}, -\frac{r}{r} \right)$$