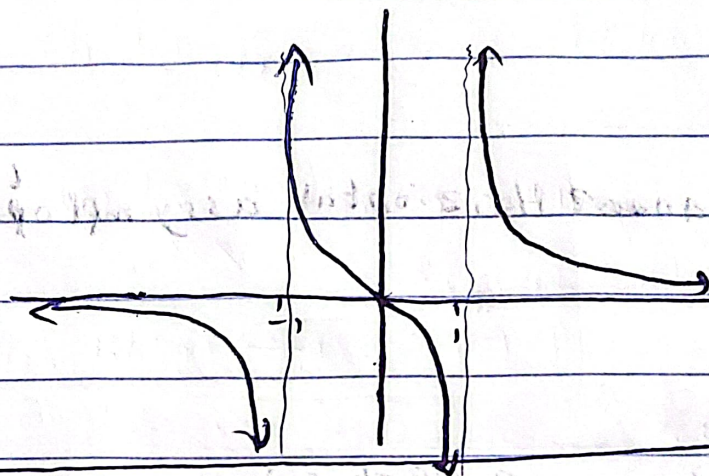


Go to ~~graph~~, -1 from

right and left.

++ --- - - - - - +++++

Sketch for $f(x) = \frac{x}{x^2-1}$



(2.5) exercises

1) a. 0, b. -2, c. 2, d. DNE, e. -1, f. ∞ , g. DNE, h. $\frac{1}{2}$, i. 0

2) a. 2, b. -3, c. 2, d. DNE, e. ∞ , f. ∞ , g. ∞ , h. ∞ , i. $-\infty$, j. DNE, k. 0, l. -1

3 $\rightarrow$ 8

$$3) \lim_{x \rightarrow \infty} f(x) = \lim_{x \rightarrow \infty} \frac{x^2}{x^2} - 3 = 0 - 3 = -3, \quad \lim_{x \rightarrow \infty^-} f(x) = \lim_{x \rightarrow \infty^-} \frac{x^2}{x^2} - 3 = 0 - 3 = -3$$

$$4) \lim_{x \rightarrow \infty} f(x) = \lim_{x \rightarrow \infty} \pi - \frac{2}{x^2} = \pi - 0 = \pi, \quad \lim_{x \rightarrow \infty^-} f(x) = \lim_{x \rightarrow \infty^-} \pi - \frac{2}{x^2} = \pi - 0 = \pi$$

$$5) \lim_{x \rightarrow \infty} g(x) = \lim_{x \rightarrow \infty} \frac{1}{2 + \frac{1}{x}} = \frac{1}{2+0} = \frac{1}{2}, \quad \lim_{x \rightarrow \infty^-} g(x) = \lim_{x \rightarrow \infty^-} \frac{1}{2 + \frac{1}{x}} = \frac{1}{2}$$