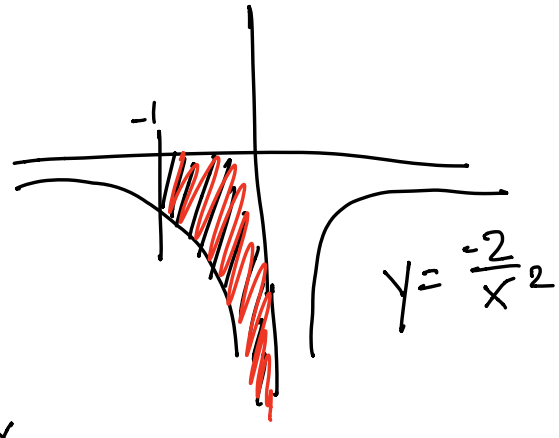
$$\int_{-1}^{0} \frac{-2}{x^2}\,dx$$



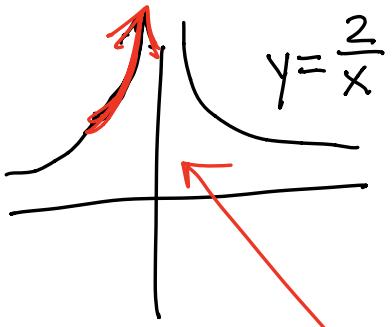

$$= \lim_{b \to 0^-} \int_{-1}^{b} \frac{-2}{x^2}\,dx$$

$$= \lim_{b \to 0^-} -2 \int_{-1}^{b} x^{-2}\,dx$$

$$= \lim_{b \to 0^-} -2 \left. \frac{x^{-1}}{-1} \right|_{-1}^{b}$$

$$= \lim_{b \to 0^-} \left. \frac{2}{x} \right|_{-1}^{b}$$

$$= \lim_{b \to 0^-} \left( \frac{2}{b} - \frac{2}{-1} \right)$$




$$\lim_{x \to 0^-} \frac{2}{x} = \infty$$

limit does not exist
so integral does not converge