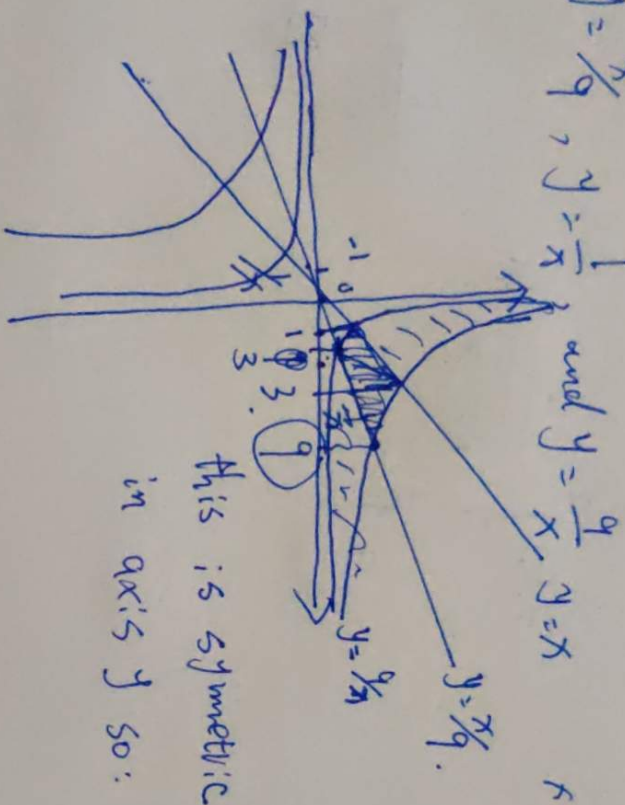


2. $y = x$, $y = \frac{x}{9}$, $y = \frac{1}{x}$ and $y = \frac{9}{x}$ $x > 0$

$$\begin{cases} y = x \\ y = \frac{x}{9} \\ y = \frac{1}{x} \\ y = \frac{9}{x} \end{cases}$$



This is symmetric in axis y so:

$$\begin{cases} y = \frac{x}{9} \\ y = \frac{1}{x} \end{cases} \Rightarrow \frac{x}{9} = \frac{1}{x}$$

$$\Rightarrow x^2 = 9 \Rightarrow x = \pm 3$$

$$\begin{cases} y = \frac{x}{9} \\ y = \frac{1}{x} \end{cases} \Rightarrow \frac{x}{9} = \frac{1}{x}$$

$$\Rightarrow x^2 = 9 \Rightarrow x = \pm 3$$

$$\begin{cases} y = x \\ y = \frac{1}{x} \end{cases} \Rightarrow x = \frac{1}{x}$$

$$\begin{cases} y = x \\ y = \frac{1}{x} \end{cases} \Rightarrow x = \frac{1}{x}$$

$$A = \int_0^9 (x - \frac{x}{9}) dx$$

$$= \int_0^9 x dx - \int_0^9 \frac{x}{9} dx$$

$$= \frac{x^2}{2} - \frac{x^2}{18} \Big|_0^9 = \frac{81}{2} - \frac{81}{18} = \frac{81}{3} = 27$$

$$A = \int_1^9 (\frac{9}{x} - \frac{1}{x}) dx$$

= not x

$$A = \int_1^9 (\frac{9}{x} - \frac{1}{x}) dx$$

= not x

infite.

= not.