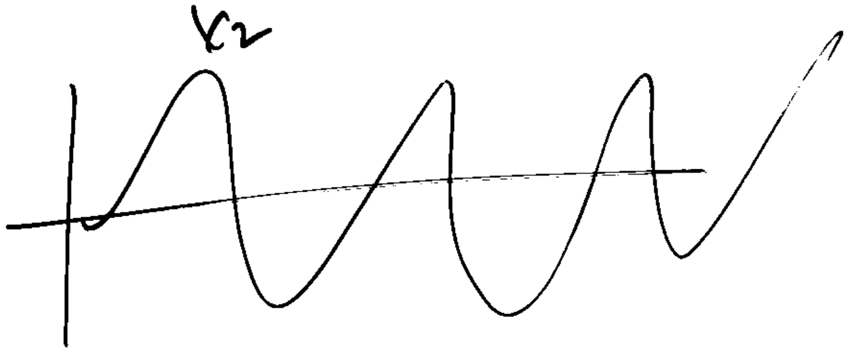
$$f(x) = \frac{1}{x^2} = \phi.$$

$$x = \frac{1}{x} = g(x)$$

$$x_0 = 1$$

x_1

x_2



$$f(x) = 0$$

$$x \,?=$$

$$x = g(x)$$

$$\uparrow$$

$$x_1 = g(x = x_0)$$

$$x_2 = g(x = x_1)$$

$$\vdots$$

$$x_n \longrightarrow x$$

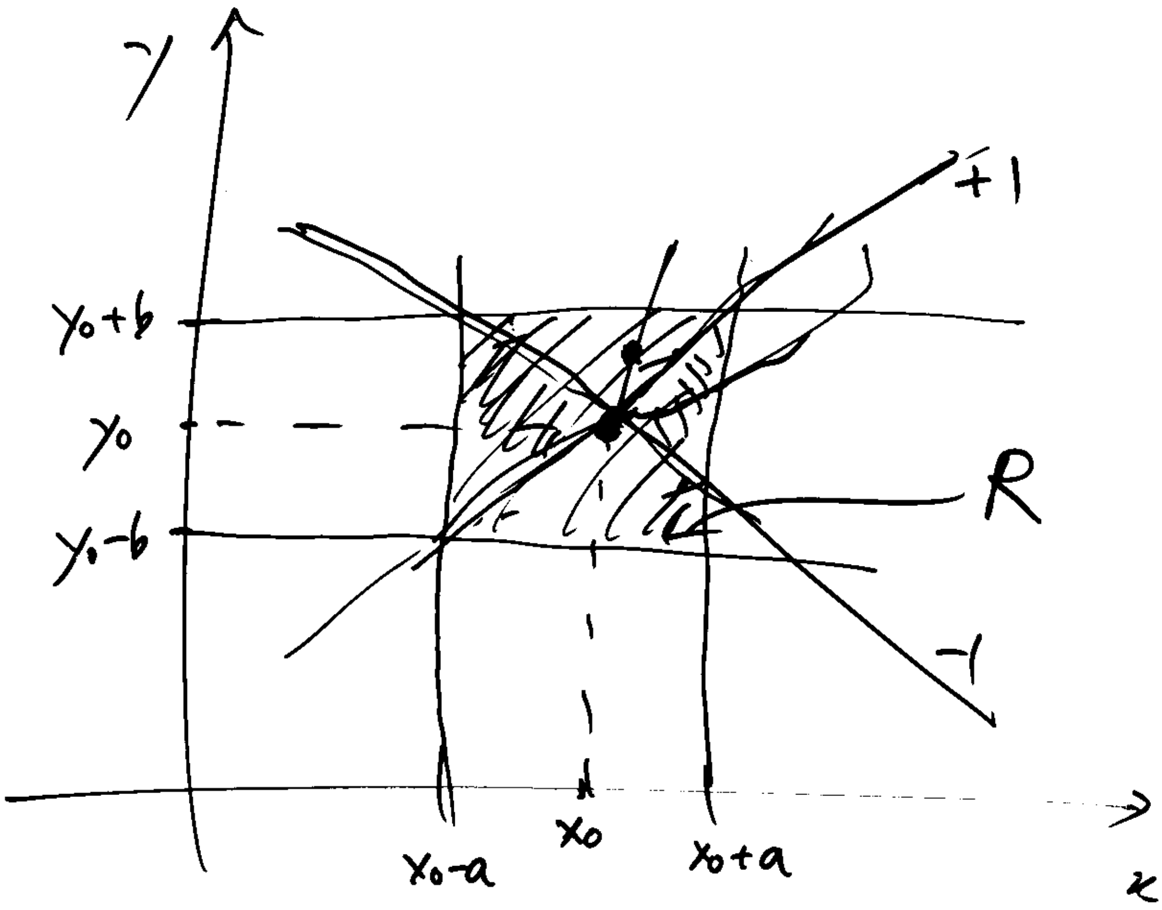
$$f(x) = x^2 - 2x + 1 = 0 \qquad x_0 = 0$$

$$x = 1$$

$$x = \frac{x^2 + 1}{2} = g(x)$$

$$x_1 = g(0) = \frac{1}{2}$$

$$x_2 = \frac{(\frac{1}{2})^2 + 1}{2} = \frac{5}{8}$$



$$\underline{y' = f(x,y)}$$

$$|f(x,y)| \leq K = 1$$

$$-1 \leq f(x,y) \leq +1$$

$$1 \leq y' \leq +1$$

$$x_0 = 2$$

$$x_1 = \frac{(2)^2 + 1}{2} = \frac{5}{2}$$

$$y' = f(x,y)$$

1st order 1st deg.

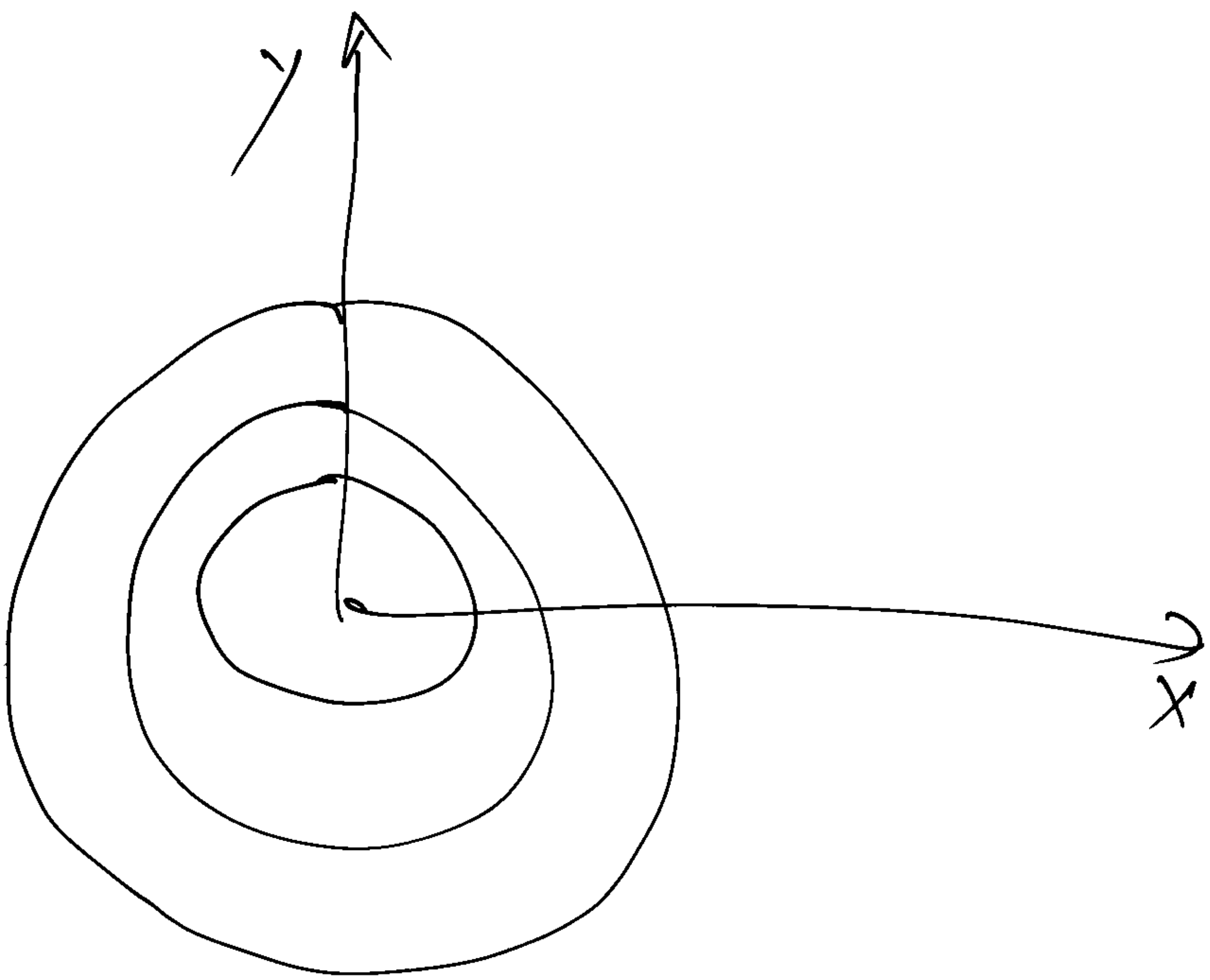
1s

$$p(x) = \frac{s'(x)}{s(x)}$$

$$= \boxed{\frac{1}{s(x)} \frac{ds(x)}{dx}}$$

~~$u = x^3 + y^3 = cons$~~

$u = x^2 + y^2 = \text{const.} > 0$



$u = y \sin xy + x \cos y^2 = \underset{\text{const}}{0}$