



$$f(x) = (1-x)\sqrt{x}$$

$$D_f = [0, +\infty)$$

$$f(0) = 0$$

$$f(1) = 0$$

$$\lim_{x \rightarrow \infty} ((1-x)\sqrt{x}) = -\infty$$

$$\frac{\partial}{\partial x} ((1-x)\sqrt{x}) = \frac{1-3x}{2\sqrt{x}}$$

$$= 0 \text{ ha } x = \frac{1}{3}$$

$$> 0 \text{ ha } 0 < x < \frac{1}{3}$$

$$< 0 \text{ ha } \frac{1}{3} < x$$

$$f\left(\frac{1}{3}\right) = \left(1 - \frac{1}{3}\right)\sqrt{\frac{1}{3}} = \frac{2\sqrt{3}}{9}$$

$$\frac{\partial}{\partial x} \left(\frac{1-3x}{2\sqrt{x}} \right) =$$

$$R_f = \left(-\infty, \frac{2\sqrt{3}}{9}\right]$$