



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

$$D_f = (-\infty, 1]$$

$$f(0) = 0$$

$$f(1) = 0$$

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

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

$$= 0 \text{ ha } x = \frac{2}{3}$$

$$> 0 \text{ ha } x < \frac{2}{3}$$

$$< 0 \text{ ha } \frac{2}{3} < x < 1$$

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

$$\frac{\partial}{\partial x} \left( \frac{2-3x}{2\sqrt{1-x}} \right) = \frac{4-3x}{4(\sqrt{1-x})^3} > 0$$

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