Defn: f is a function if

Examples:

Prove that $s(x) = \pm\sqrt{x}$ is not a function:

Defn: f is an even function if

Examples:

Prove that $f(x) = x$ is not an even function:

Defn: f is an odd function if

Examples:

Prove that $f(x) = 1$ is not an odd function:

Defn: f is an increasing function on the interval [a, b] if

Examples:

Prove that $f(x) = x^2$ is not an increasing function on the interval [-1, 0]:

Defn: f is an decreasing function on the interval [a, b] if

Examples:

Prove that $f(x) = x^2$ is not an decreasing function on the interval [0, 1]: