

1. Equation: $y = x$ $f(x) = x$

Name: Linear

Domain: $x \in \mathbb{R}$ Range: $y \in \mathbb{R}$

y-intercept: $(0, 0)$ x-intercept: $(0, 0)$

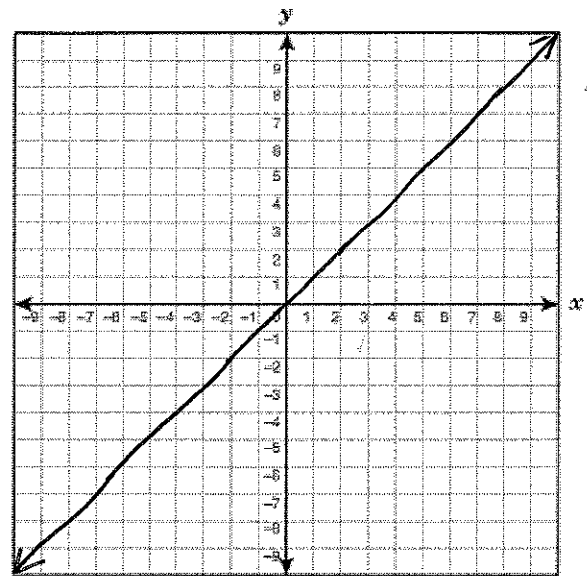
Symmetry: Origin

Even, odd or neither: odd

One to one?: yes if yes, why Horizontal Line Test

Increasing, Decreasing, or Constant, over what interval?:

Inc: $(-\infty, \infty)$



2. Equation: $y = x^2$ $f(x) = x^2$

Name: Quadratic

Domain: $x \in \mathbb{R}$ Range: $y \geq 0$

y-intercept: $(0, 0)$ x-intercept: $(0, 0)$

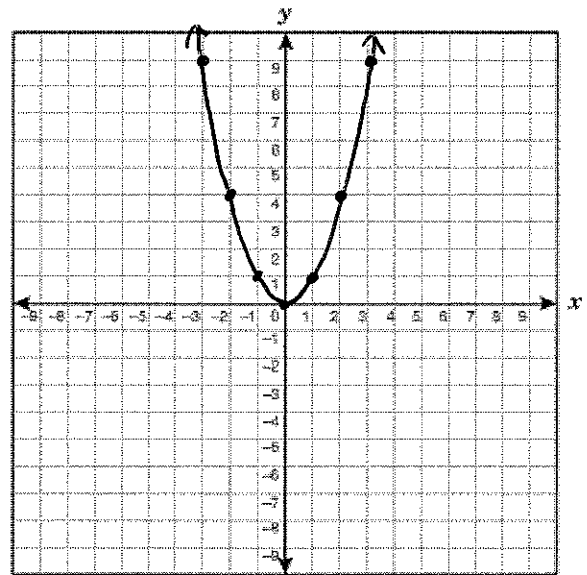
Symmetry: y-axis

Even, odd or neither: even

One to one?: no if yes, why HLT

Increasing, Decreasing, or Constant, over what interval?:

Dec: $(-\infty, 0)$ Inc: $(0, \infty)$



3. Equation: $y = x^3$ $f(x) = x^3$

Name: Cubic

Domain: $x \in \mathbb{R}$ Range: $y \in \mathbb{R}$

y-intercept: $(0, 0)$ x-intercept: $(0, 0)$

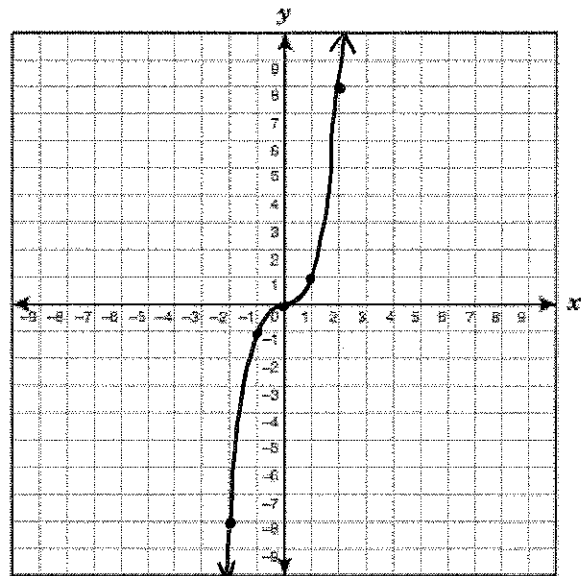
Symmetry: origin

Even, odd or neither: odd

One to one?: yes if yes, why HLT

Increasing, Decreasing, or Constant, over what interval?:

Inc: $(-\infty, \infty)$



4. Equation: $y = \sqrt{x}$ $f(x) = \sqrt{x}$

Name: Square Root

Domain: $x \geq 0$ Range: $y \geq 0$

y-intercept: $(0,0)$ x-intercept: $(0,0)$

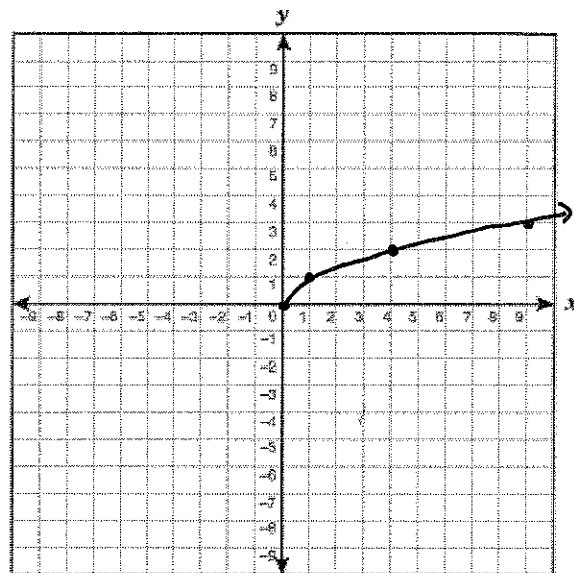
Symmetry: none

Even, odd or neither: neither

One to one? : yes if yes, why HLT

Increasing, Decreasing, or Constant, over what interval?:

Inc: $(0, \infty)$



5. Equation: $y = \frac{1}{x}$ $f(x) = \frac{1}{x}$

Name: Reciprocal or Rational

Domain: $\{x | x \neq 0\}$ Range: $\{y | y \neq 0\}$

y-intercept: none x-intercept: none

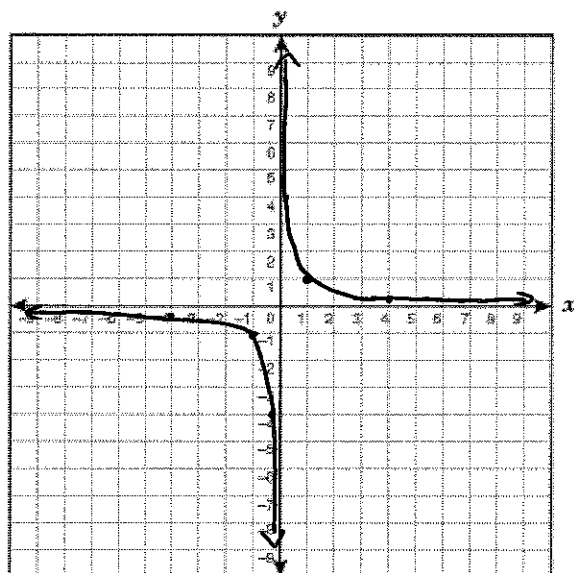
Symmetry: Origin

Even, odd or neither: odd

One to one? : yes if yes, why HLT

Increasing, Decreasing, or Constant, over what interval?:

Dec: $(-\infty, 0) \cup (0, \infty)$



6. Equation: $y = \lfloor x \rfloor$ $f(x) = \lfloor x \rfloor$

Name: Step Function (Piecewise)

Domain: $x \in \mathbb{R}$ Range: y is an integer

y-intercept: $(0,0)$ x-intercept: between $[0,1)$

Symmetry: none

Even, odd or neither: neither

One to one? : no if yes, why _____

Increasing, Decreasing, or Constant, over what interval?:

Constant between consecutive integers.

greatest integer

$\leq x$

ex) $\lfloor 2.3 \rfloor = 2$

$\lfloor -1 \rfloor = -1$

$\lfloor \frac{1}{2} \rfloor = 0$

