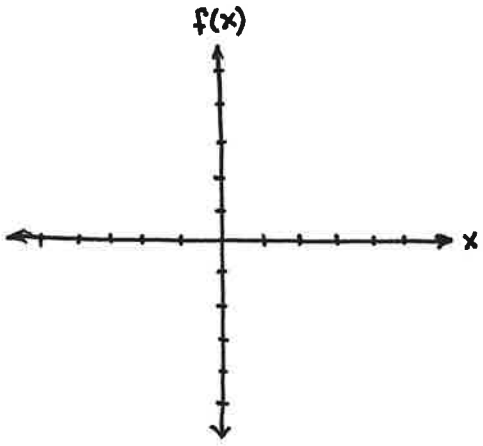
MATH 0482
Chapter 2.4 Graphing the Basic Functions

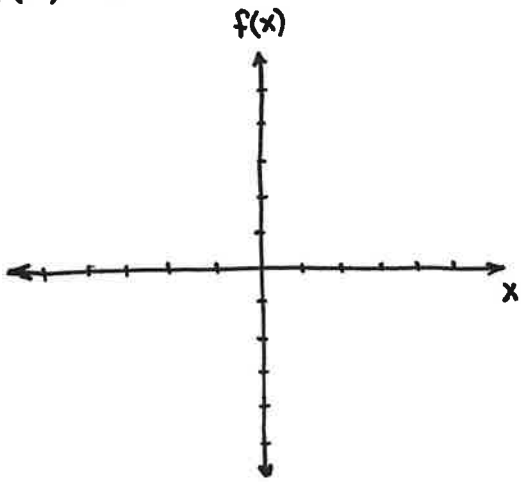
IDENTITY FUNCTION:

$f(x) = x$



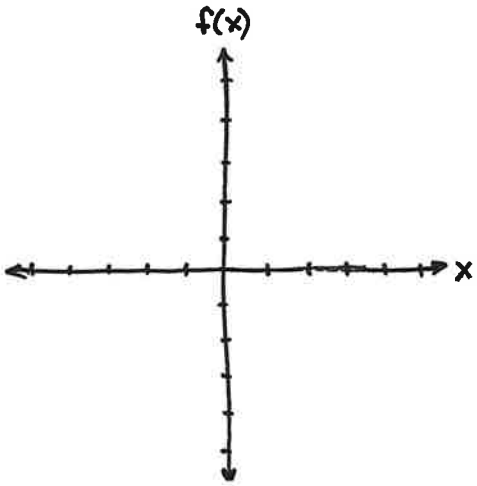
CONSTANT FUNCTION:

$f(x) = c$



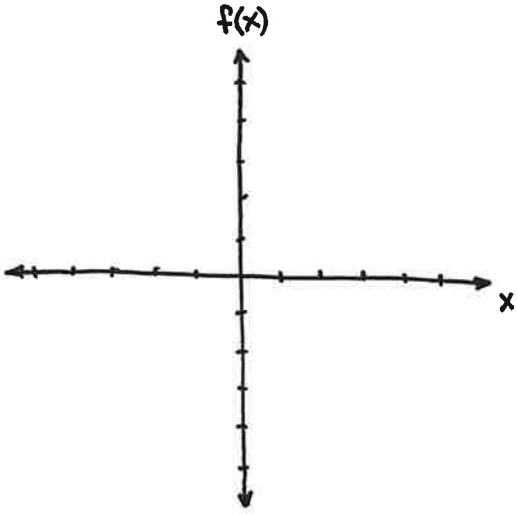
SQUARE FUNCTION:

$f(x) = x^2$



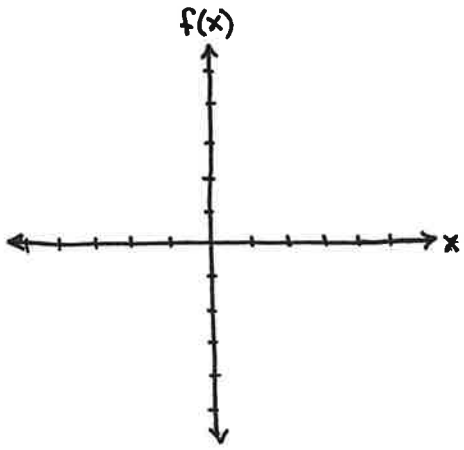
CUBE FUNCTION:

$f(x) = x^3$



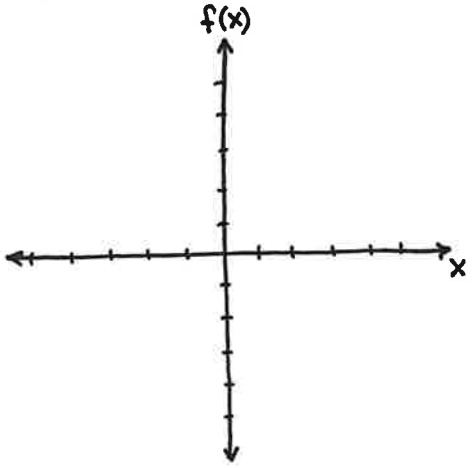
SQUARE ROOT FUNCTION:

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



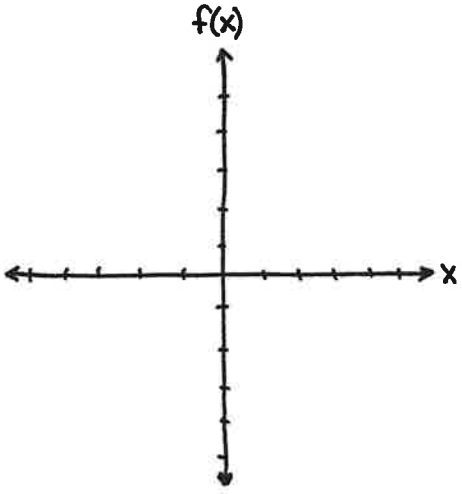
CUBE ROOT FUNCTION:

$f(x) = \sqrt[3]{x}$



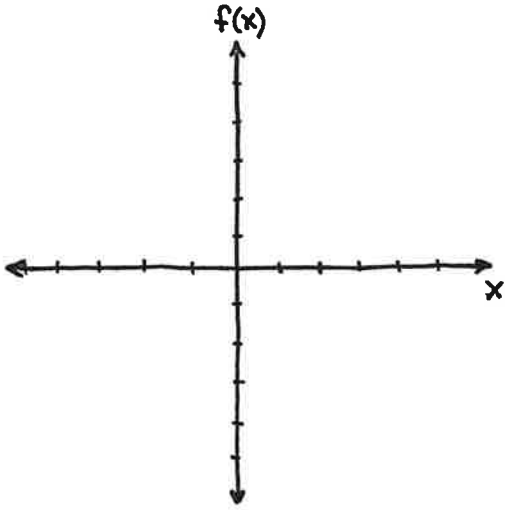
ABSOLUTE VALUE FUNCTION:

$f(x) = |x|$



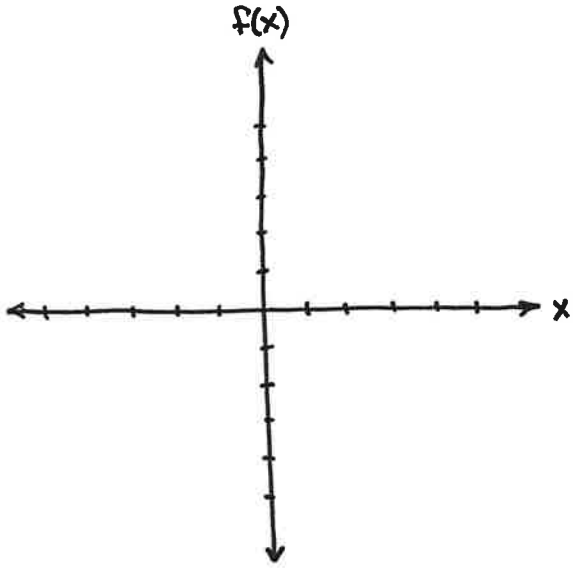
RECIPROCAL FUNCTION:

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



PIECEWISE FUNCTION: FUNCTION OF PIECES
VALUE OF DOMAIN DETERMINES DEFINITION

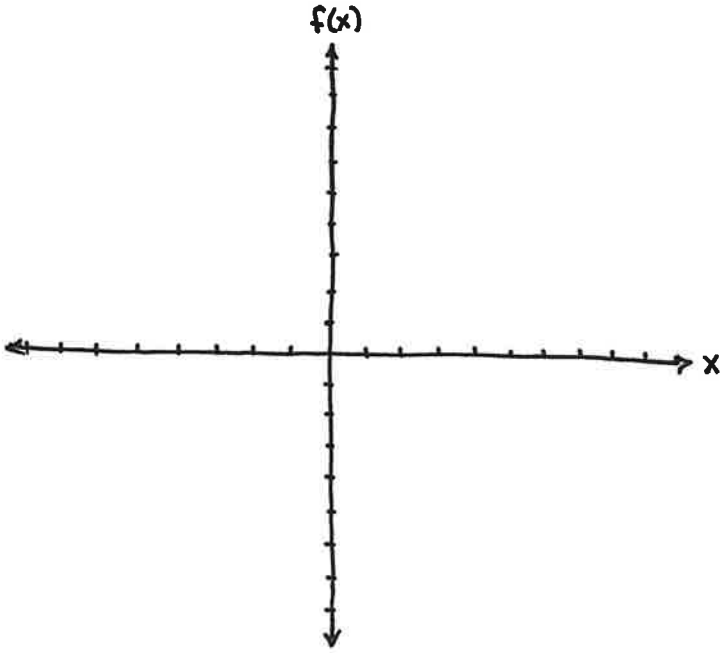
GRAPH $f(x) = \begin{cases} x^2 \text{ IF } x < 0 \\ \sqrt{x} \text{ IF } x \geq 0 \end{cases}$



GIVEN $f(x) = \begin{cases} 7x+3 \text{ IF } x < 0 \\ -16x^2+32x \text{ IF } x \geq 0 \end{cases}$, FIND THE FOLLOWING.

$f(-5)$ $f(0)$ $f(3)$

GRAPH $f(x) = \begin{cases} x^3 & \text{IF } x < 0 \\ x & \text{IF } 0 \le x \le 4 \\ 6 & \text{IF } x > 4 \end{cases}$.



GRAPH $f(x) = [x]$.

GREATEST INTEGER FUNCTION:

X IS A REAL NUMBER

f(x) IS THE GREATEST INTEGER LESS THAN OR EQUAL TO X