

Equation/Function

Table of Values

Intercept & End Behavior

Graph

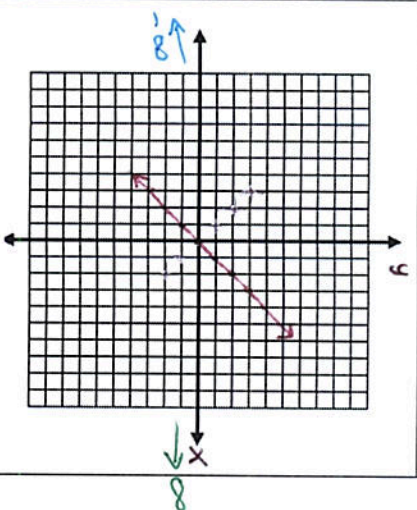
Linear

$$f(x) = x$$

x	f(x)
-3	$f(-3) = -3$
-2	$f(-2) = -2$
-1	$f(-1) = -1$
0	$f(0) = 0$
1	$f(1) = 1$
2	$f(2) = 2$
3	$f(3) = 3$
4	$f(4) = 4$

y-intercept: (0, 0)

End-Behavior:
As $x \rightarrow -\infty$, $f(x) \rightarrow -\infty$
As $x \rightarrow \infty$, $f(x) \rightarrow \infty$



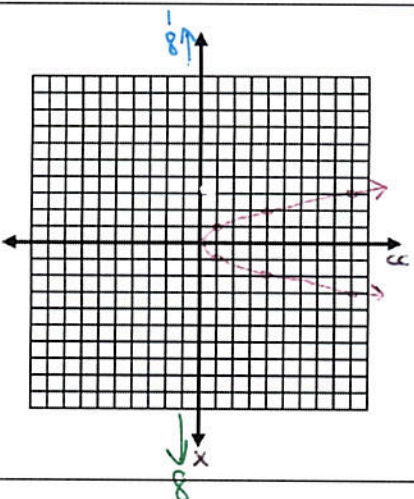
Quadratic

$$f(x) = x^2$$

x	f(x)
-3	$f(-3) = (-3)^2 = 9$
-2	$f(-2) = (-2)^2 = 4$
-1	$f(-1) = (-1)^2 = 1$
0	$f(0) = (0)^2 = 0$
1	$f(1) = (1)^2 = 1$
2	$f(2) = (2)^2 = 4$
3	$f(3) = (3)^2 = 9$
4	$f(4) = (4)^2 = 16$

y-intercept: (0, 0)

End-Behavior:
As $x \rightarrow -\infty$, $f(x) \rightarrow \infty$
As $x \rightarrow \infty$, $f(x) \rightarrow \infty$



Exponential

$$f(x) = 2^x$$

x	f(x)
-3	$f(-3) = 2^{-3} = \frac{1}{8}$
-2	$f(-2) = 2^{-2} = \frac{1}{4}$
-1	$f(-1) = 2^{-1} = \frac{1}{2}$
0	$f(0) = 2^0 = 1$
1	$f(1) = 2^1 = 2$
2	$f(2) = 2^2 = 4$
3	$f(3) = 2^3 = 8$
4	$f(4) = 2^4 = 16$

y-intercept: (0, 1)

End-Behavior:
As $x \rightarrow -\infty$, $f(x) \rightarrow 0$
As $x \rightarrow \infty$, $f(x) \rightarrow \infty$

