4.7 Graphs and Their
          equations

Two parts
1. Writing Linear
     Equations from tables
2. Graphing using tables
     4 graph types

For Linear Equations
        $y = mx + b$
    m - product change
    b - sum / difference

X	Y
-3	6
-2	4
-1	2
0	0 ←
1	-2
2	-4
3	-6.

$y = -2x$

X	Y
-3	-8
-2	-7
-1	-6
0	-5 ←
1	-4
2	-3
3	-2

$y = x - 5$

X	Y
-3	-4
-2	-2
-1	0
0	2 ←
1	6
2	8

$y = 2x + 2$

Equations and Graphing
        Linear
        $y = x + 2$

X	Y
-3	-1
-2	0
-1	1
0	2
1	3
2	4
3	5
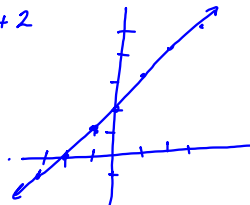
Quadratic (square of X)

$y = 2x^2$

Parabola

X	Y
-3	18
-2	8
-1	2
0	0
1	2
2	8
3	18
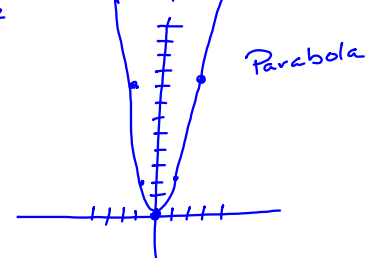
$|-2| = 2 \qquad -|2| = -2$
$|2| = 2 \qquad -|-2| = -2$

Absolute Value Graphs (V's)

$y = |x| - 1$

X	Y
-3	2
-2	0
-1	-1
0	0
1	0
2	1
3	2
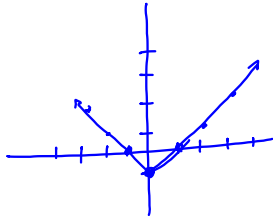
Rational (Ratios where X is the denominator)

$y = \dfrac{2}{X} \qquad y = -\dfrac{2}{X}$

X	Y
-3	-2/3
-2	-1
-1	-2
-0.5	-4
0.5	4
2	2
2	1
3	2/3

Pos 1, 3
-Neg 2, 4