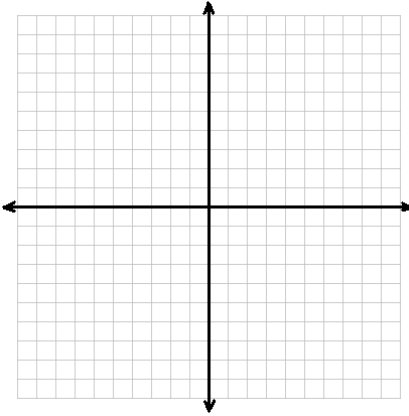


Solving Equations and Inequalities by Graphing

Warm-up: Solve $-3x + 20 = 5$

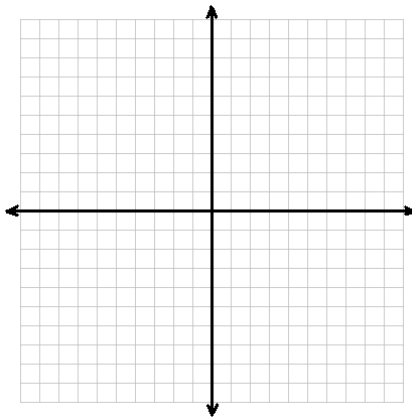
The process you used to solve the above equation is called solving _____ . Another way to solve equations and inequalities is to solve by _____ .

Example 1: Solve $-3x + 20 = 5$ by graphing.

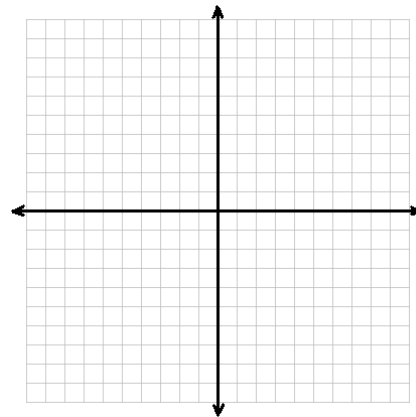


One advantage of solving by graphing is that it allows you to solve complicated equations and inequalities.

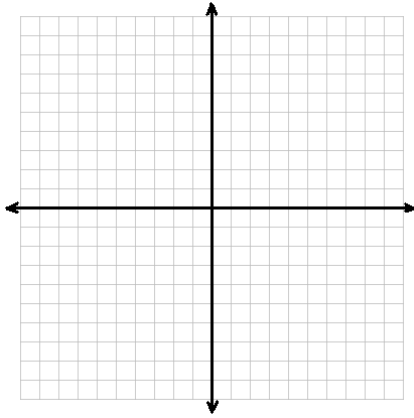
Example 2: a) Solve $|x - 4| = \frac{1}{2}x + 1$ by graphing.



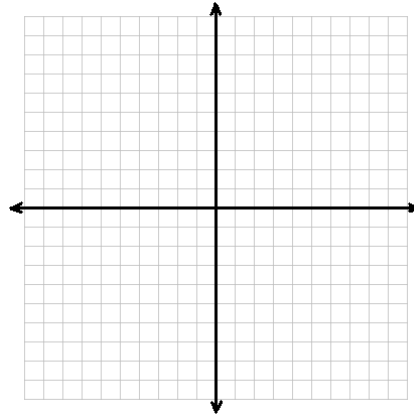
b) Solve $-|x - 2| = -\frac{1}{2}x - 2$ by graphing.



Example 3: a) Solve $x^2 - 4 \geq 0$ by graphing.

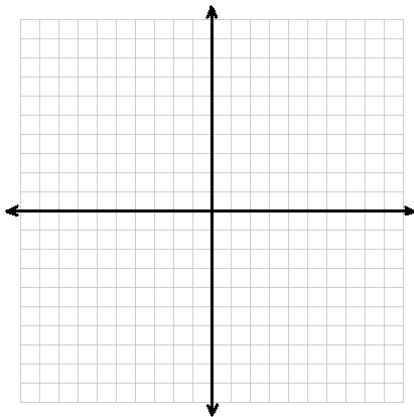


b) Solve $-x^2 + 9 > 0$ by graphing.



Example 4: Solve with technology (DESMOS):

a) Solve $-x^2 + 8x - 13 = |x - 4|$



b) Solve $x^2 + 2x - 1 = |x + 2| + 2$

