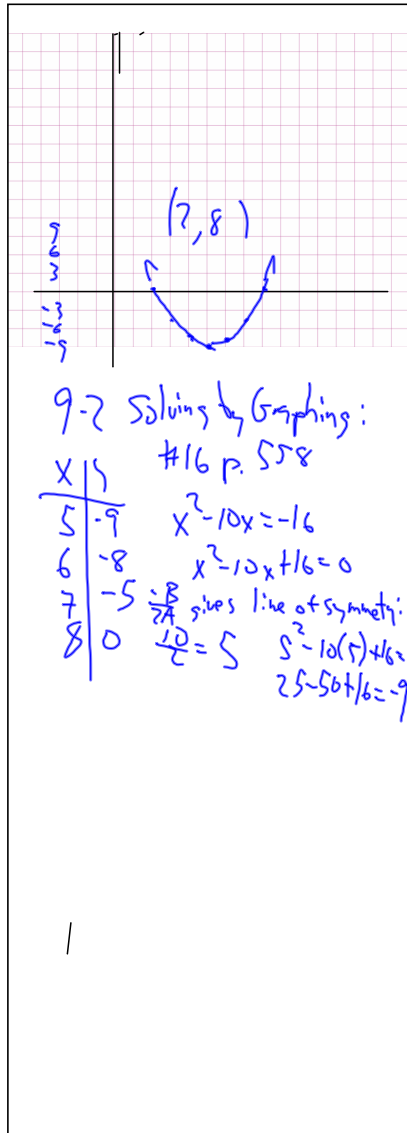


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2 2 2

9-3
Transformation: Changes the position or size of the figure

Translation: Moves a figure
Example: $x + 3$ translates up 3

Dilation: Makes the graph wider or narrower (stretches horizontally wider, or squeezes, compresses vertically narrower)
Example: $5x$ is stretched vertically

Reflection: flips a figure over a line
 $-f(x)$ reflects $f(x)$ across x-axis
 $f(-x)$ reflects $f(x)$ across y-axis
Example: $f(x) = x$
 $h(x) = -x + 8$ is a reflection across x

9-2
Solving by Graphing:
First, find the line of symmetry, by using, as you learned in 9-1, $-b/2a$. Then, find the $y=0$ by using a table of values. Equidistant values from the line of symmetry will be equal.

In a parabolic function, there are three possibilities: either it crosses the x-axis twice, it just touches it once (and its vertex is on $y=0$), or it never touches it.

Solutions are called roots. If there the function has two solutions, it's (obviously) called a double root.