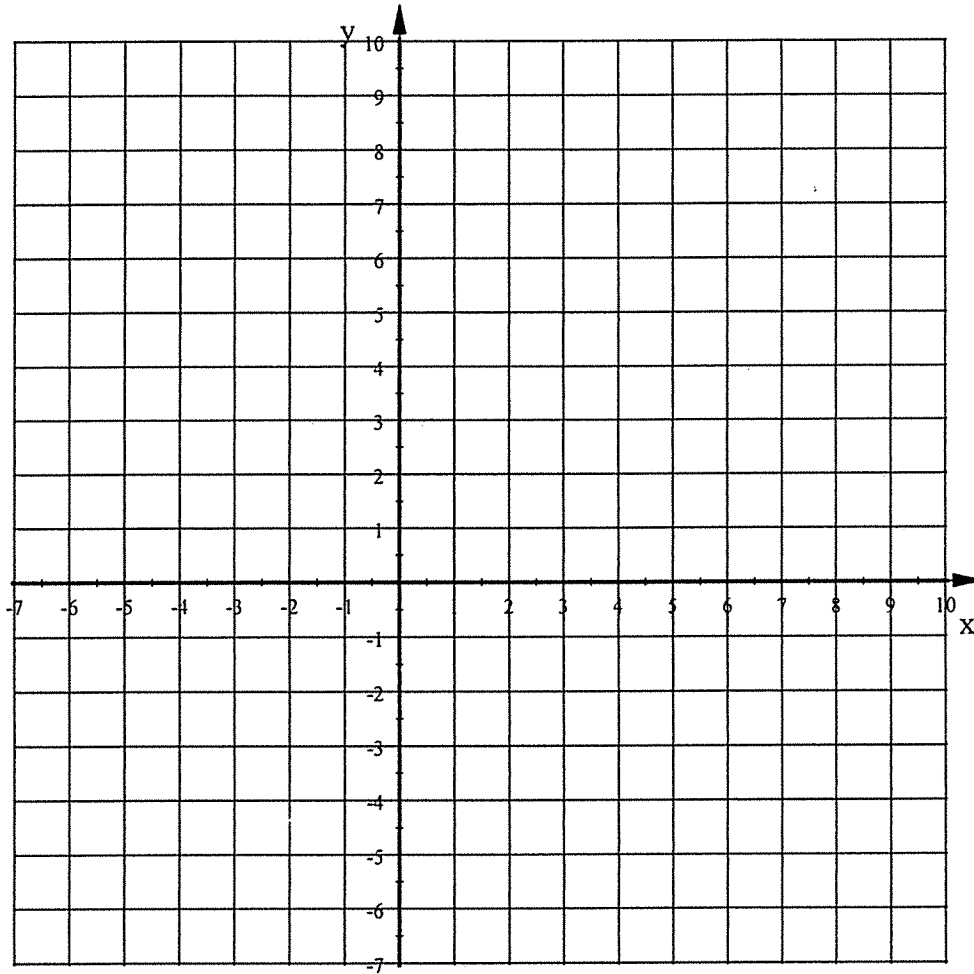


1. Plot the following points and connect them to form a parabola.

$(-6, 9), (-5, 3), (-4, 1), (-3, 3), (-2, 9)$



2. Write the equation of this parabola.

3. Take each ordered pair and switch the  $x$  and  $y$ -coordinates then plot the new point on the above graph. Do this with all five points and connect them with a smooth curve to form a new relation. Example:  $(-6, 9)$  becomes  $(9, -6)$

4. You have just created the **inverse relation** of  $f(x)$ . The inverse is denoted by the symbol  $f^{-1}(x)$ . The graph of  $f^{-1}(x)$  is actually a reflection of  $f(x)$  over a line. What is the equation for this line of reflection?

(Remember, a Line of Reflection is the line that is equidistant from corresponding points on  $f(x)$  and  $f^{-1}(x)$ . i.e. it's exactly in the middle of the two graphs)