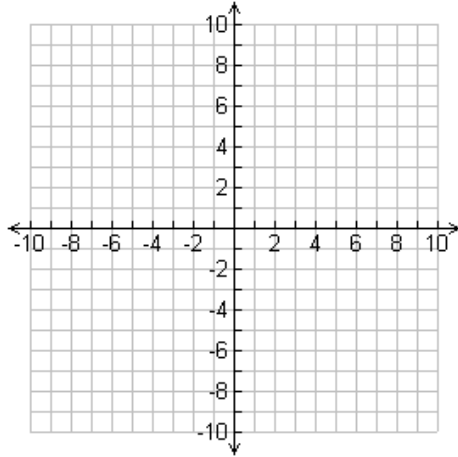


Absolute Value ARC Assessment

NAME _____

1. Solve the equation $|x - 7| = 3$ in two ways:

- Graphically: Show your system of equations and provide a sketch of your graphs.
- Algebraically: Show the piecewise functions used.



2. Solve the equation $|x^2 - 9x + 14| = 3$ using a method of your choice. Why did you choose that particular method?

3. Consider the functions $f(x) = (x - 3)^2 - 4$ and $g(x) = |f(x)|$. Explain how to use reflections to sketch the graph of $g(x)$.

4. Explain why there is no solution to the following problem: $|x^2 - 4| = -2$.