

Equation Challenges

1. Write two equations, one linear and the other an absolute value equation that share a y-intercept of 6. The absolute value equation has a vertex of $(-4, -2)$ and $a = -m$.
2. Find the linear equation that is parallel to the left half of the graph of $y = -3|x - 2| - 1$ and intersects at the point of symmetry to the y-intercept.
3. Find the linear equation that is parallel to the x-axis and intersects the graph of $y = -\frac{1}{4}|x - 6| - 3$ at only ONE point.
4. Create equations that form the capital letter "K" with a common point of intersection of $(3, 4)$ for all three lines and the diagonal lines are perpendicular.