Graphing Absolute Value

$$y = a|x-h| + k$$

Algorithm

1. Find the vertex (h,k)
2. Pick a convenient x to find another point
3. Use symmetry to find a third point

Graph the following

1. $y = |x|$

2. $y = |x| - 1$

3. $y = |x| + 3$

4. $y = |x - 2|$

5. $y = |x + 4|$

6. $y = |x + 1| + 2$

7. $y = -|x - 2| + 3$

8. $y = 2|x - 4| + 1$

9. $y = -2|x - 4| + 1$

10. $y = 3|x - 1| - 2$

11. $y > |x + 3| + 2$

12. $y \leq -2|x| + 1$