Graphing Quadratic and Absolute Value Functions

Sketch the graph of each of the following functions. Label the vertex of each. Make sure to use graph paper, and a ruler to draw the x and y axis.

1. $y = x^2 + 3$

2. $y = -x^2 + 2$

3. $y = (x-4)^2$

4. $y = (x-3)^2 - 4$

5. $y = -(x+2)^2 + 1$

6. $y = 2(x-2)^2 - 9$

7. $y = -3(x+4)^2$

8. $y = \frac{1}{2}(x-2)^2 - 9$

9. $y = |x+3|$

10. $y = -|x-5| - 3$

11. $y = |x+2| - 4$

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

13. $y = |x| - 5$

14. $y = 2|x+3| - 6$

15. $y = -\frac{1}{4}|x| + 1$

16. $y = -|x-5|$