

Algebra 2
Practice 2.7

Name _____
Date _____ Hour _____

Describe the transformation from the parent function $f(x) = |x|$. Then graph each equation using transformations.

1. $y = |x| - 4$

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

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

4. $y = \frac{1}{4}|x| - 3$

5. $y = -3|x - 1|$

Without graphing, identify the vertex, axis of symmetry, and transformations from the parent function $f(x) = |x|$.

6. $y = |x - 4|$

Transformations

Vertex = _____

AOS = _____

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

Vertex = _____

AOS = _____

8. $y = -|x + 5| + 4$

Vertex = _____

AOS = _____

9. $y = 5 - |x - 1|$

Vertex = _____

AOS = _____

10. $y = 2|x + 7| - 4$

Vertex = _____

AOS = _____

11. Graph $y = -|x - 4| + 5$. List the vertex and the x- and y-intercepts if any.

Vertex = _____

x-intercept = _____

y-intercept = _____

Graph each absolute value equation using a t-chart.

12. $y = 3 - |x + 1|$

13. $y = |x + 1| - 3$

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

15. $y = -\frac{1}{2}|2(x - 2)|$

Write an absolute value equation for each graph.

