

Solve the following absolute value equations algebraically. Circle or box your answer.

1. $ 10x - 12 = 2x$	2. $ -x + 3 = -4$	3. $2 x - 4 = 14$
4. $4 - 2 x + 9 = -6$	5. $ x + 4 + 3 = 17$	6. $ 2x - 4 = 6x$

Solve the following absolute value inequalities. Graph the solution set & write answer in interval notation.

7. $ x + 3 < 1$	8. $ 4x + 1 > -5$
9. $ 3x + 3 \geq 6$	10. $3 x + 4 \leq 3$

$$11. 3|7-x|+4 \leq 19$$

$$12. -2|x+3| \leq 22$$

Identify the vertex of the function, tell whether the function opens up or down, and tell whether the graph is *wider, narrower, or the same width* as the graph of $f(x) = |x|$. Graph the function.

$$13. j(x) = -2|x-4| + 3$$

$$14. g(x) = -\frac{1}{4}|x|$$

$$15. h(x) = |x-3| + 4$$

Vertex: (,)

Opens: _____

Width: _____

Vertex: (,)

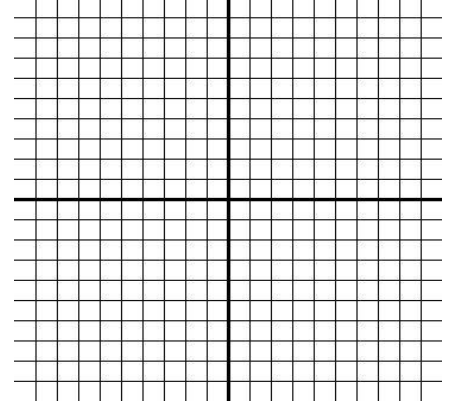
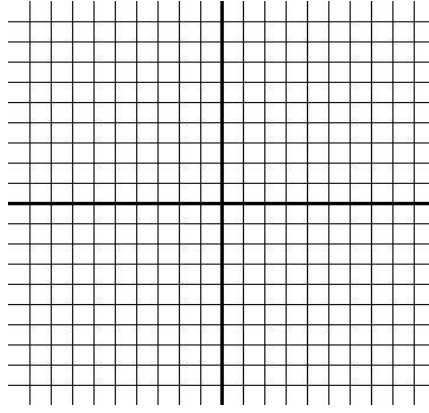
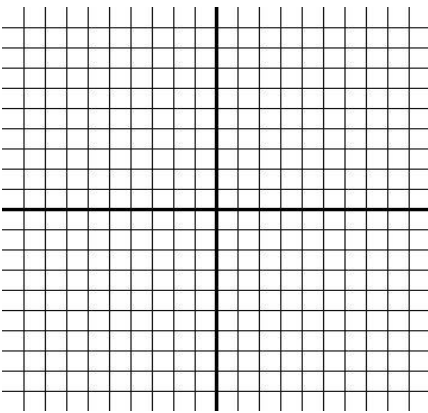
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Vertex: (,)

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Write an equation of the graph.

16.

