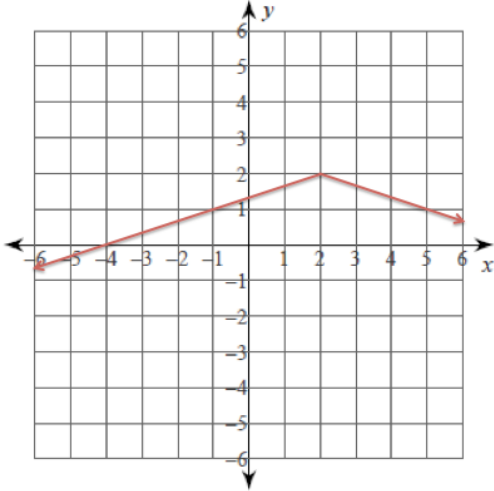


Absolute Value Test Review

Name: _____

Determine the attributes of each graph.

1)



Equation: _____

Vertex: _____ Opens: _____

Slopes: _____ Axis of Symmetry: _____

Increasing: _____ Decreasing: _____

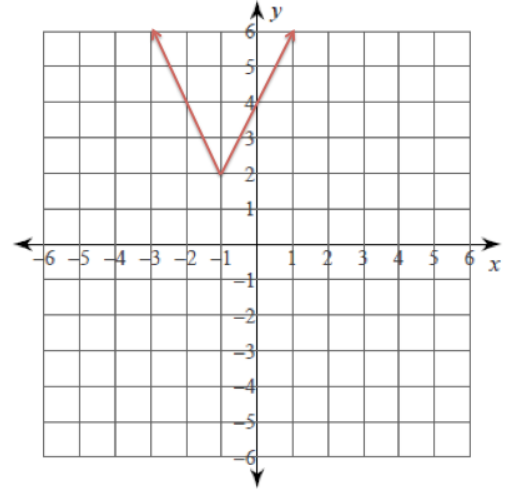
Domain: _____ Range: _____

x-intercept(s): _____ y-intercept: _____

End behavior: _____
and _____

Transformation(s): _____

2)



Equation: _____

Vertex: _____ Opens: _____

Slopes: _____ Axis of Symmetry: _____

Increasing: _____ Decreasing: _____

Domain: _____ Range: _____

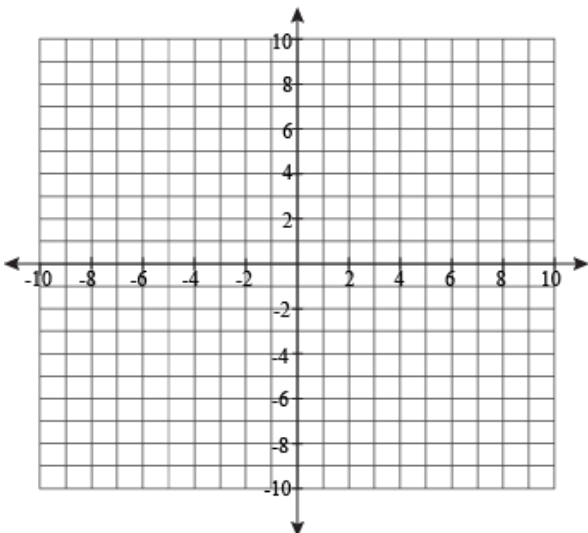
x-intercept(s): _____ y-intercept: _____

End behavior: _____
and _____

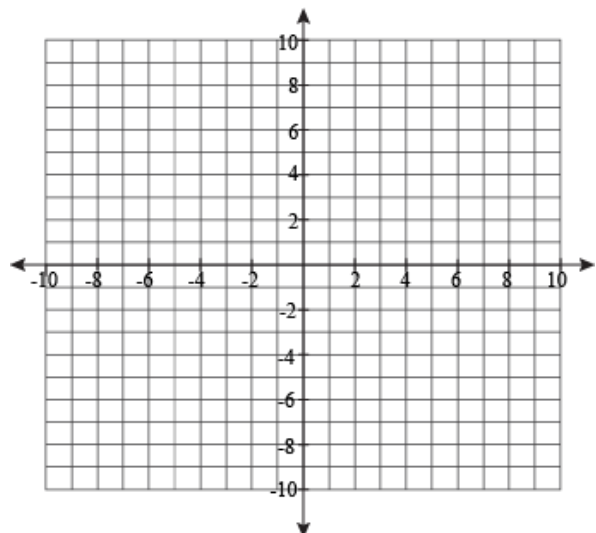
Transformation(s): _____

Graph the following absolute value equations by hand.


3) $y = 2|2x - 6| - 5$




4) $g(x) = -|6 - 6x| + 1$



Find the solution set for each inequality. Show the number line and interval notation.



5) $-\frac{1}{2}|2x + 1| - 6 > -20$



6) $|x + 4| + 23 \geq 58$

Solve each equation. Check for extraneous solutions.

7) $-3|x - 1| = -18$

8) $|2x + 5| - 2 = 3x + 1$

9) $2|2x - 5| = 10 - 6x$

10) $|3 - 3x| - 4 = -1$

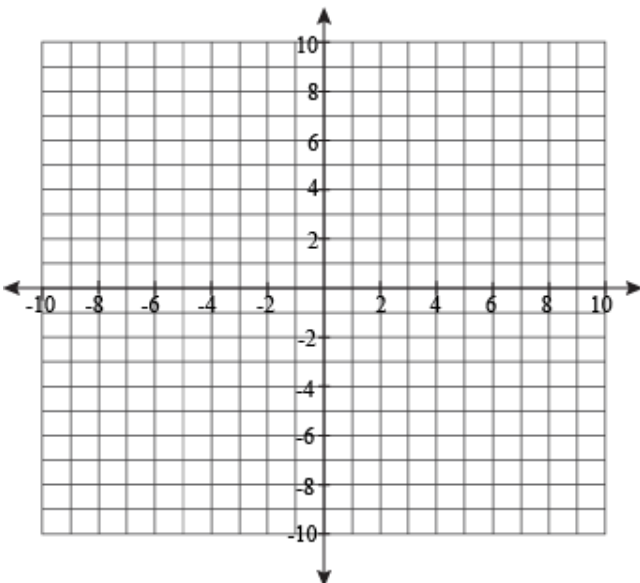
Write the following absolute value equation as a piecewise equation.

11) $f(x) = 3|2x + 4| - 6$

12) A man is sitting in a boat on a lake (presumably looking for a pearl). He can get a sunburn from sunlight that hits him directly and from a sun beam that reflects off the water. A sun beam reflects off the water at the point $(3,0)$ and hits the man at the point $(6,2)$.

a. Write an equation for the path of the sun beam.

b. Graph the function for the path of the sun beam.



c. Is it possible for the sun beam to hit a bird flying overhead at the point $(20,12)$? Why or why not?

Evaluate each absolute value.

Given: $f(x) = 2|4 - 5x| + 1$

$g(x) = -|2x + 3| + 4$

$h(x) = \frac{1}{4}|x + 3|$

13) $f(2)$

14) $h(-1)$

15) $g(-3)$

16) $g(x - 6)$