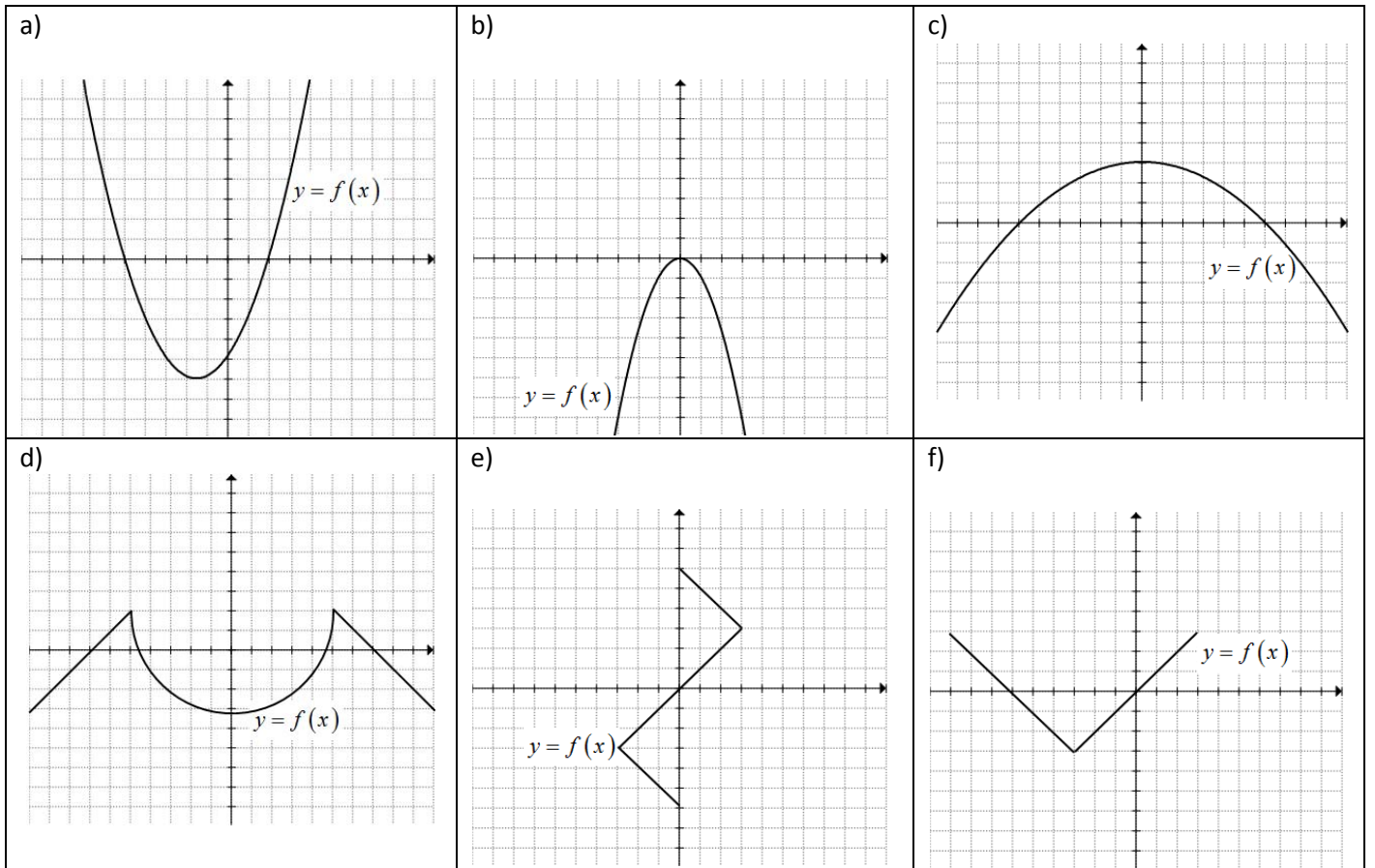
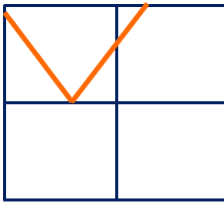
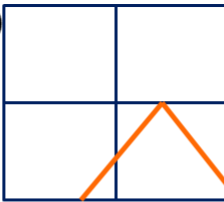
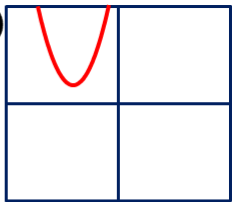
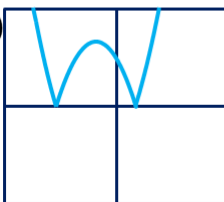

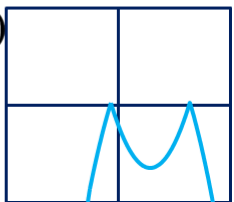


**Section 1.5a Absolute Value and Inverse of Quadratic Functions**

1. Graph  $y = |f(x)|$  for each function on the same grid:

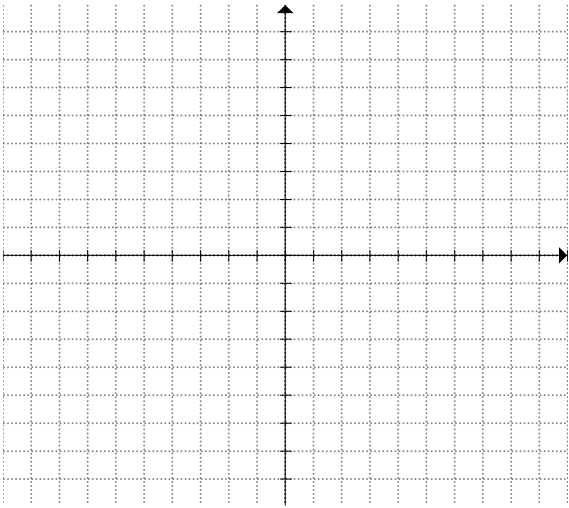


2. Given each equation on the right, indicate which of the graphs on the right is the corresponding one:

<p>a) <math>y = - -3x + 7 </math></p>	<p>b) <math>y =  (x+3)^2 - 4 </math></p>	<p>i)</p> 	<p>ii)</p> 	<p>iii)</p> 
<p>c) <math>y = -(x-3)^2 - 5</math></p>	<p>d) <math>y =  3x + 7 </math></p>	<p>iv)</p> 	<p>v)</p> 	<p>vi)</p> 
<p>e) <math>y =  (x+3)^2 + 1 </math></p>	<p>f) <math>y = - -5x - 8  + 4</math></p>			

3. Graph each of the following functions on the grid provided. Get the Domain and Range, state the piece wise function:

a)  $y = |x^2 - 4|$

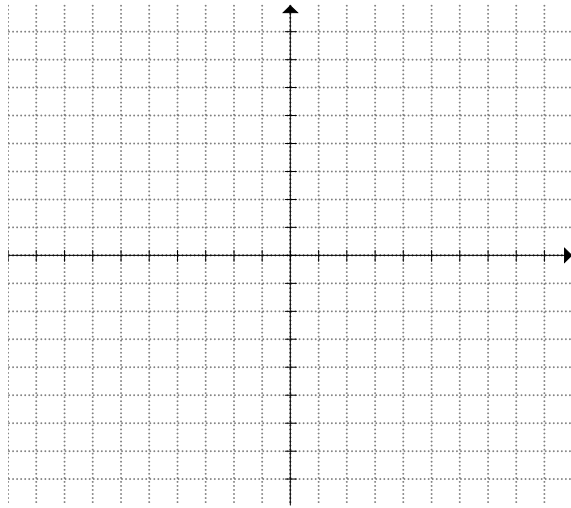


Domain

Range:

Piece Wise Function:

$y = |0.5x^2 + 3|$

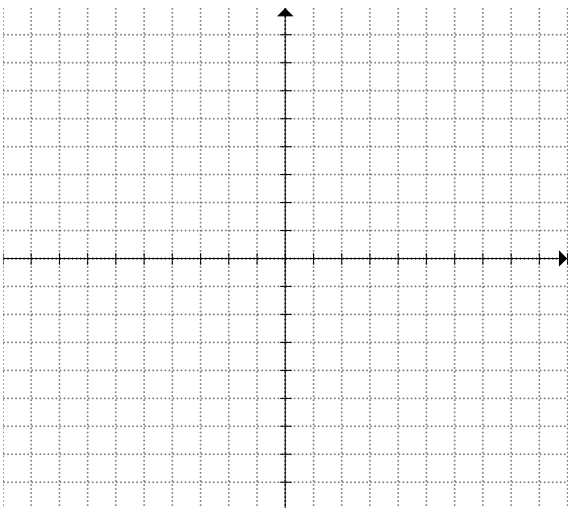


Domain

Range:

Piece Wise Function:

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

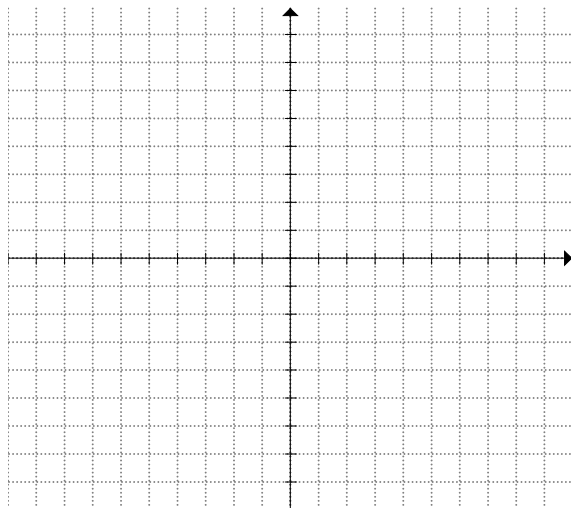


Domain

Range:

Piece Wise Function:

$y = -|2x^2 - 3x - 10|$



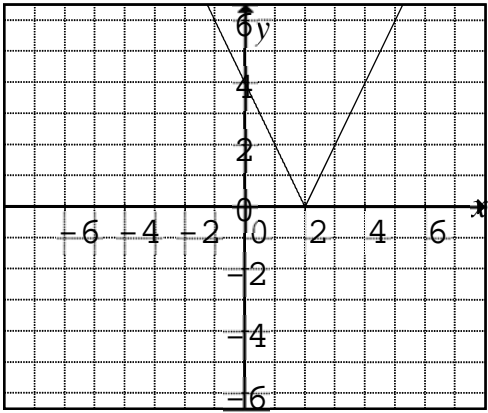
Domain

Range:

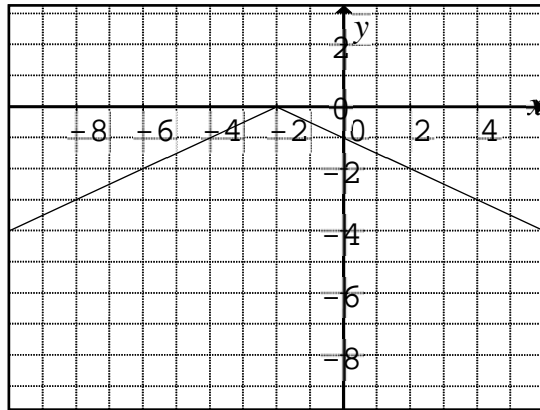
Piece Wise Function:

3. Write the piecewise function that represents each absolute value function.

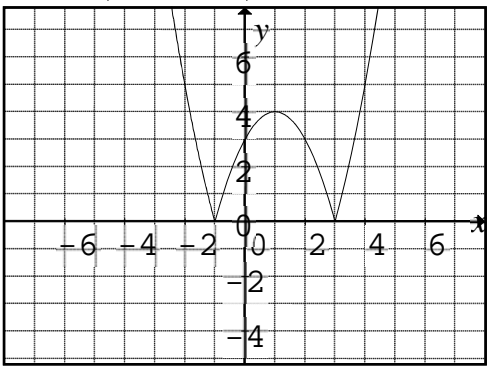
a)  $y = |2x - 4|$



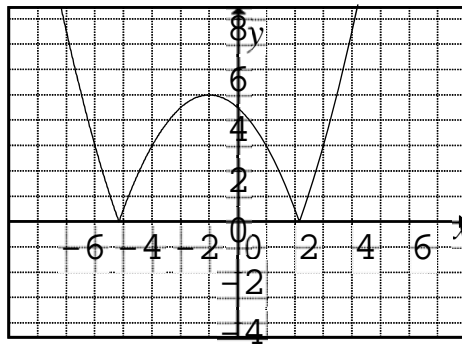
b)  $y = -\frac{1}{2}x + 1$



c)  $y = |x^2 - 2x - 3|$



d)  $y = |0.5(x+1)^2 - 5|$



4. What is the difference between the graphs of  $y = |3x + 1|$  and  $y = -|3x + 1|$ .

5. What is the difference between the graphs of  $y = |3x + 1|$  and  $y = |3x + 1| + 4$ .

6. The following points  $(3, 5)$ ,  $(-3, -7)$ ,  $(-2, 8)$ ,  $(7, -10)$ , and  $(-3, -9)$  are on the function  $y = f(x)$ .

What will the coordinates be on the function:  $y = |f(x)|$ ?

7. Solve each of the following:

a)  $|x-3| = x-4$

b)  $|2x-3| = x+4$

c)  $|x^2+9| = 6x$

d)  $|2x^2-x-6| = 2x+1$

k)  $|x^2+9| = 6x$

l)  $|2x^2-x-6| = 2x+1$

m)  $12 = |x^2+3|$

n)  $|x^2-10x| = 24$