SM 2

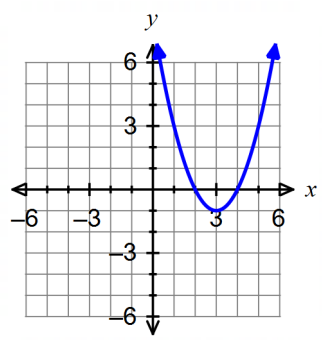
Name:_____ Period:_____

7.4 Graphing Quadratic Functions

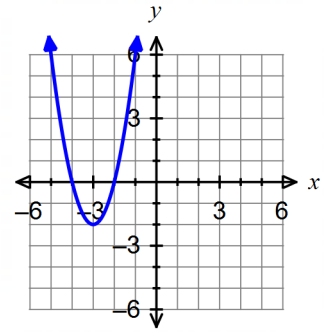
Match each equation to its correct graph from the choices below.

1. $f(x)=2(x+2)(x+4)$ _____
2. $y=-\frac{1}{2}(x-2)(x+4)$ _____
3. $f(x)=(x-2)(x-4)$ _____
4. $y=-(x+1)^2+3$ _____
5. $f(x)=-2(x-1)^2+3$ _____
6. $f(x)=\frac{1}{2}(x-1)^2-3$ _____
7. $f(x)=x^2-6x+5$ _____
8. $y=-x^2+6x-5$ _____
9. $y=x^2+6x+5$ _____

A.



B.



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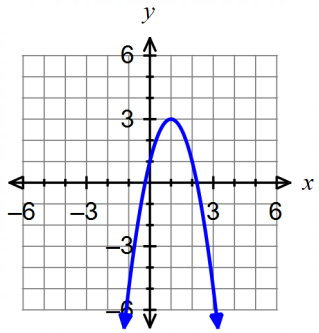
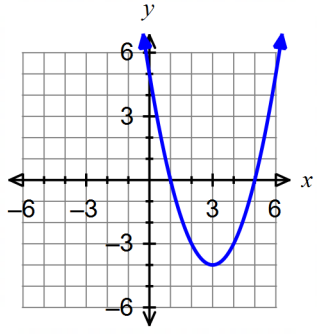
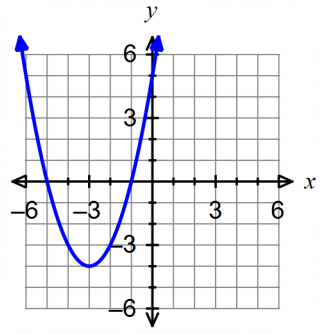


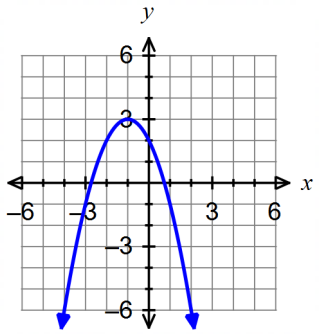
D.



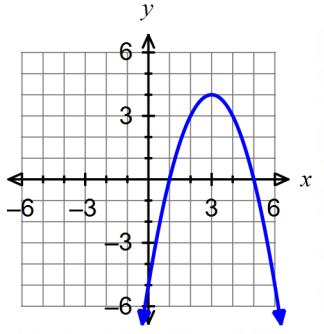
E.



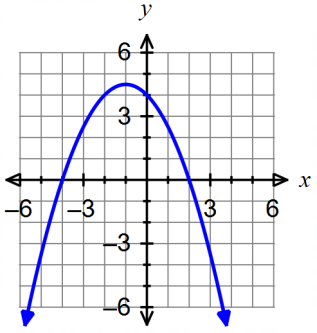
F.



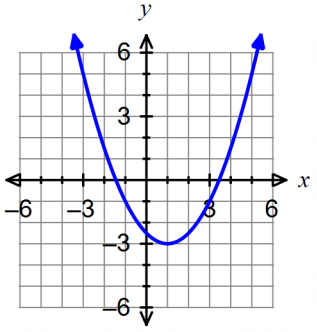
G.



H.



I.



For each function, do the following: 1) state whether the function is in **standard**, **vertex**, or **factored** form, 2) state whether the parabola opens **up** or **down**, 3) find the **zeros** (x-values)**,** 4) state the ***x*-intercepts** as ordered pairs, 5) state the ***y*-intercept** as an ordered pair, 6) state the **axis of symmetry**, and 7) state the **vertex**. Draw the graph using at least 5 exact points. **Show work for any features that can't be seen directly from the numbers in the equation!**

10. $f(x) = -2(x-2)(x+4)$

1) Form: _____

2) Direction of opening: _____

3) Zeros: _____

4) x-intercepts: _____

5) y-intercept: _____

6) Axis of symmetry: _____

7) Vertex: _____

Show work here:

11. $y = -x^2 + 6x$

1) Form: _____

2) Direction of opening: _____

3) Zeros: _____

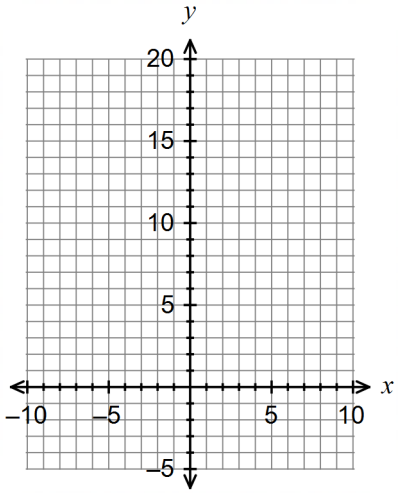
4) x-intercepts: _____

5) y-intercept: _____

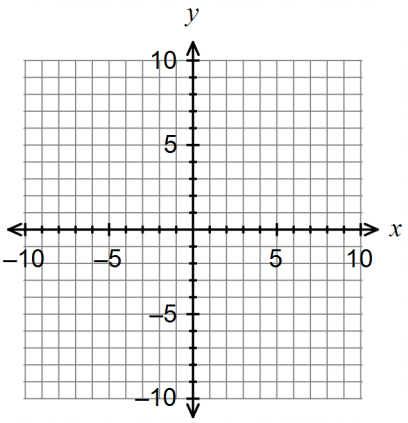
6) Axis of symmetry: _____

7) Vertex: _____

Show work here:



x	$f(x)$



x	y

12. $y = 3(x-1)^2$

1) Form: _____

2) Direction of opening: _____

3) Zeros: _____

4) x-intercepts: _____

5) y-intercept: _____

6) Axis of symmetry: _____

7) Vertex: _____

Show work here:

13. $f(x) = x^2 - 3x - 10$

1) Form: _____

2) Direction of opening: _____

3) Zeros: _____

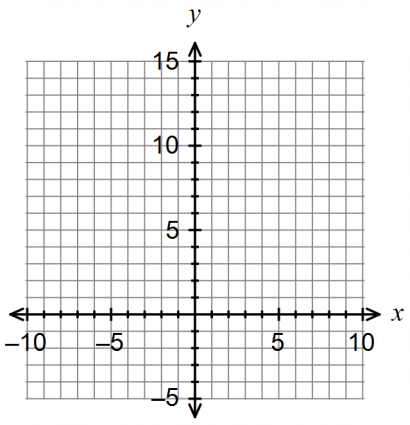
4) x-intercepts: _____

5) y-intercept: _____

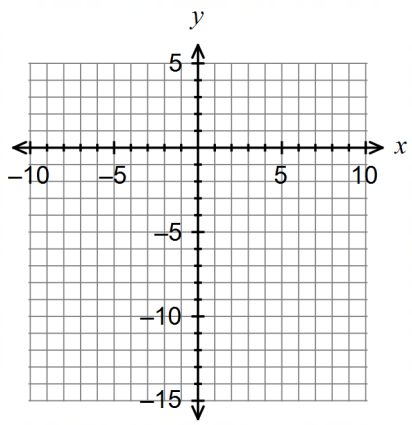
6) Axis of symmetry: _____

7) Vertex: _____

Show work here:



x	y



x	$f(x)$

14. $f(x)=\frac{1}{2}(x-1)(x+3)$

1) Form: _____

2) Direction of opening: _____

3) Zeros: _____

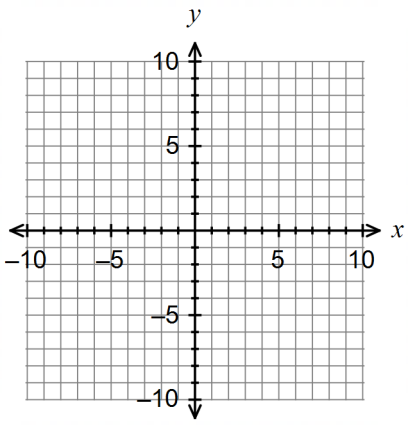
4) x-intercepts: _____

5) y-intercept: _____

6) Axis of symmetry: _____

7) Vertex: _____

Show work here:



x	$f(x)$

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

1) Form: _____

2) Direction of opening: _____

3) Zeros: _____

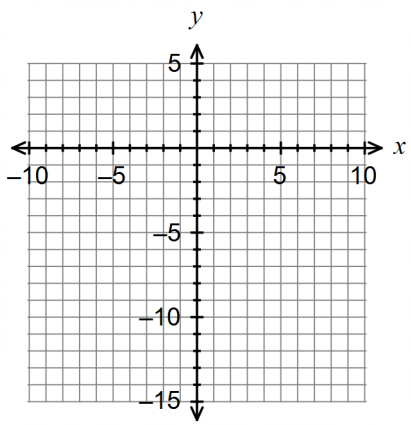
4) x-intercepts: _____

5) y-intercept: _____

6) Axis of symmetry: _____

7) Vertex: _____

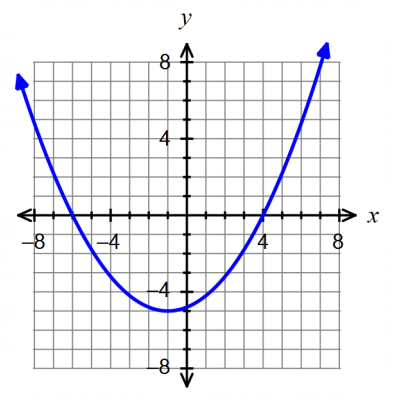
Show work here:



x	y

Circle the correct equation for each graph.

16.



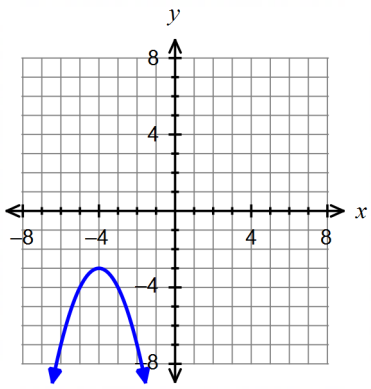
A. $y=\frac{1}{5}(x-6)(x+4)$

B. $y=5(x-6)(x+4)$

C. $y=\frac{1}{5}(x+6)(x-4)$

D. $y=5(x+6)(x-4)$

17.



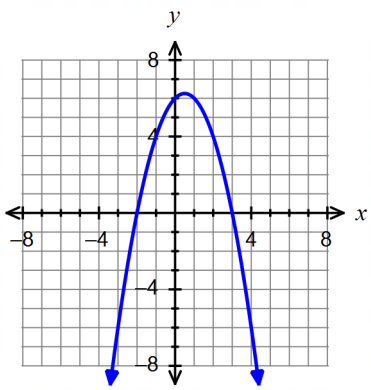
A. $y=-(x+4)^2+3$

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

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

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

18.



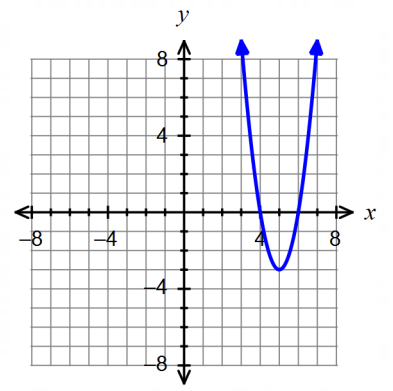
A. $y=-x^2-x-6$

B. $y=-x^2-5x-6$

C. $y=-x^2+x+6$

D. $y=-x^2+5x+6$

19.



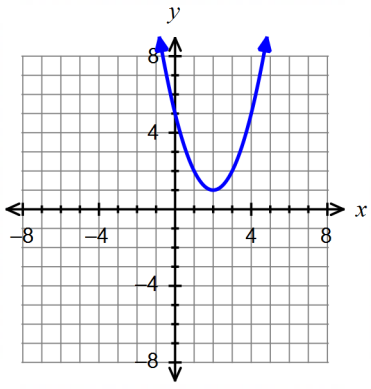
A. $y=\frac{1}{3}(x-5)^2-3$

B. $y=3(x+5)^2-3$

C. $y=3(x-5)^2-3$

D. $y=\frac{1}{3}(x+5)^2-3$

20.



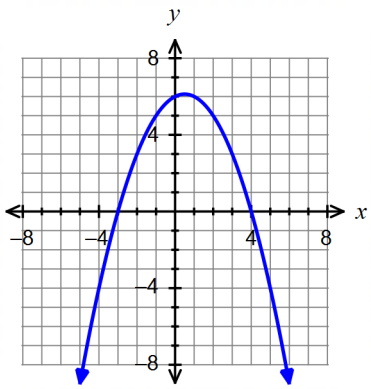
A. $y=x^2+6x-5$

B. $y=x^2+6x+5$

C. $y=x^2-4x-5$

D. $y=x^2-4x+5$

21.



A. $y=-\frac{1}{2}(x+3)(x-4)$

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

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

D. $y=-\frac{1}{2}(x-3)(x+4)$