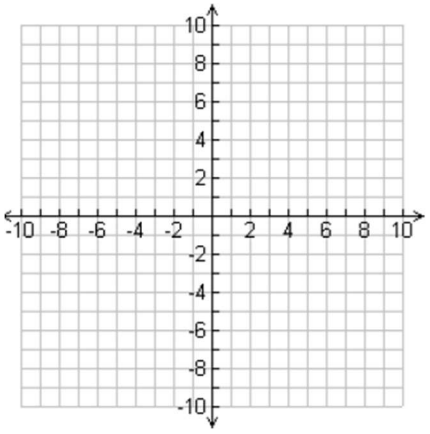
Name_____ Date_____ Pd___

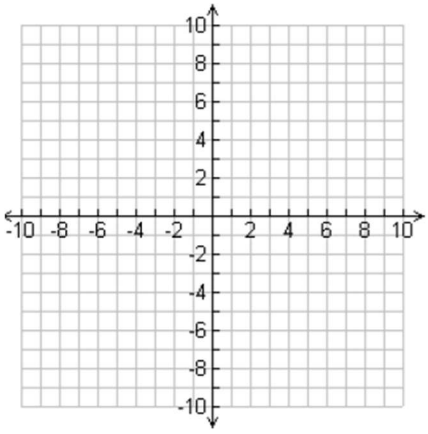
Alg2: Vertex Form of a Quadratic Function HOMEWORK

For #1-4 State the vertex, axis of symmetry, domain and range in interval notation, max or min value, and graph. Include at least 3 points on the graph.

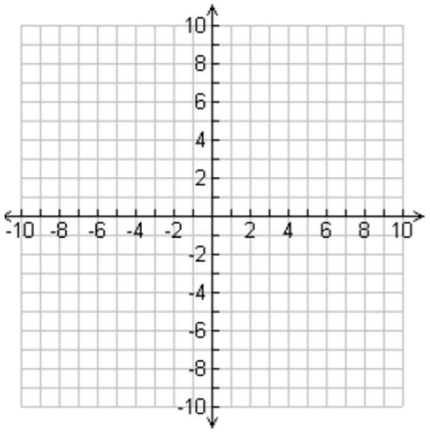
1. $f(x)=(x+2)^2-1$



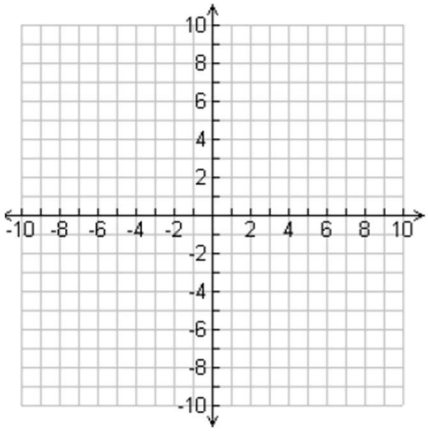
2. $f(x)=-3(x-2)^2-4$



3. $f(x)=\frac{1}{4}(x+4)^2+3$



4. $f(x)=-2(x+5)^2-3$



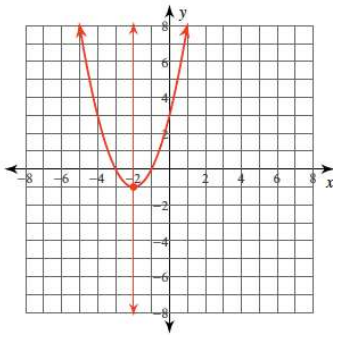
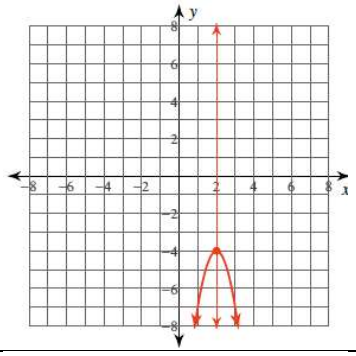
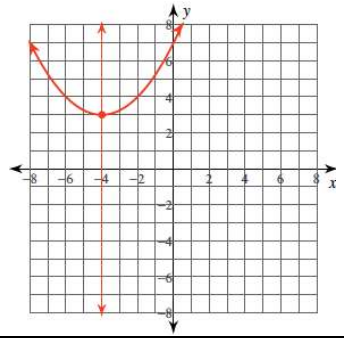
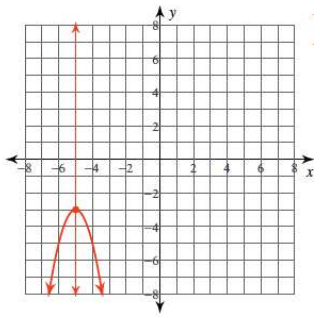
For #5-10 Write the function in vertex form. State the vertex.

5. $y=x^2+16x+71$

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

7. $y = x^2 + 4x$	8. $y = x^2 - 12x + 46$
9. $y = x^2 - 6x + 5$	10. $y = x^2 + 3x + 2$

Vertex Form of a Quadratic Function Homework ANSWERS:

1. Vertex: $(-2,-1)$ AOS: $x = -2$ Domain: $(-\infty,\infty)$ Range: $[-1,\infty)$ Min Value: -1	
2. Vertex: $(2\ -4)$ AOS: $x = 2$ Domain: $(-\infty,\infty)$ Range: $(-\infty,-4]$ Max Value: -4	
3. Vertex: $(-4\ 3)$ AOS: $x = -4$ Domain: $(-\infty,\infty)$ Range: $[3,\infty)$ Min Value: 3	
4. Vertex: $(-5,-3)$ AOS: $x = -5$ Domain: $(-\infty,\infty)$ Range: $(-\infty,-3]$ Max Value: -3	

5. $y=(x+8)^2+7$ v: $(-8,7)$
6. $y=(x-1)^2-6$ v: $(1,-6)$
7. $y=(x+2)^2-4$ v: $(-2,-4)$
8. $y=(x-6)^2+10$ v: $(6,10)$
9. $y=(x-3)^2-4$ v: $(3,-4)$
10. $y=\left(x+\frac{3}{2}\right)^2-\frac{1}{4}$ v: $(-\frac{3}{2},-\frac{1}{4})$