

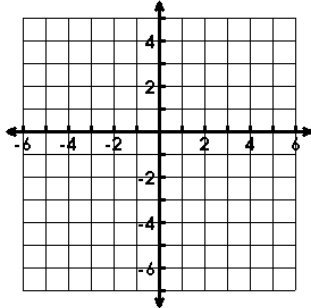
Name: _____ Date: _____

Unit 5 Review

Graph the following equation. Then, write the characteristics for the graph.

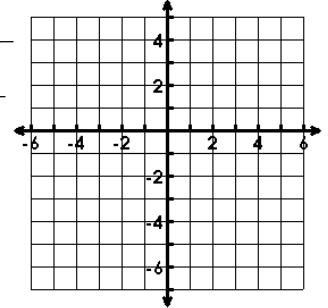
1. $y = 2(x+1)^2 - 5$

- Vertex: _____
- Axis of Sym.: _____
- Solutions: _____
- Y-intercept: _____

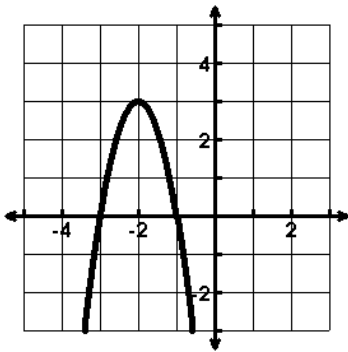


2. $y = -x^2 + 4x$

- Vertex: _____
- Axis of Sym.: _____
- Zeros: _____
- Y-Intercept: _____



3.



- Describe the transformations: _____
- Write the equation in vertex form: _____
- Roots: _____

Describe the transformations to the parent function in the given equations.

Function	a	h	k
4. $-f(x+2) - 5$			
5. $3f(x-4) + 2$			
6. $\frac{1}{2}f(x) - 1$			
7. $-f(x-2)$			

Solve using any method.

8. $x^2 - 14x = -10$

Change the equations to standard form.

9. $y = 2(x - 1)^2 + 4$

10. $y = -(x + 4)^2 - 6$

Change the equations to vertex form.

11. $y = -3x^2 + 6x - 2$

12. $y = 2x^2 + 8x + 1$

An object is projected into the air with a path described by the function $h(t) = -16t^2 + 96t + 160$ where h is the height above the ground in feet and t is the time in seconds since the object started along the path.

13. Find the time the object changes direction.
14. Find the maximum height of the object.
15. Describe the location of the object at 2.5 seconds.

The height, in meters, of a ball as it falls at a given time (x), in seconds, can be found using the equation $f(x) = -4x^2 + 36$.

16. At what height does the ball **start**?
 17. When does the ball hit the **ground**?
-