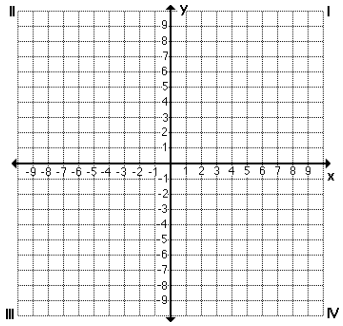
Algebra 2 Unit 3 Review

SHOW ALL WORK on the worksheet

Graph each function. Identify the vertex, A.O.S., domain, range, intercepts, max/min value, and end behavior.

1. $g(x) = 2x^2 - 4x - 5$



Vertex:

A.O.S.:

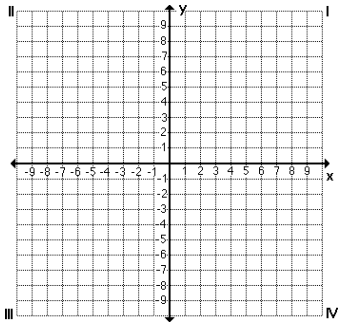
x-intercept:

y-intercept:

Max/Min Value:

End Behavior:

2. $f(x) = 3(x - 1)(x + 4)$



Vertex:

A.O.S.:

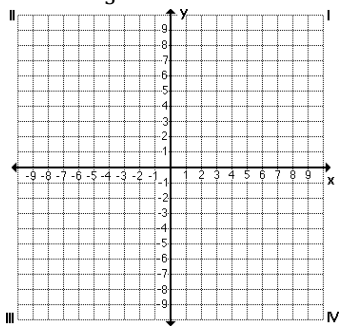
x-intercept:

y-intercept:

Max/Min Value:

End Behavior:

3. $y = -\frac{1}{3}(x + 2)^2 + 7$



Vertex:

A.O.S.:

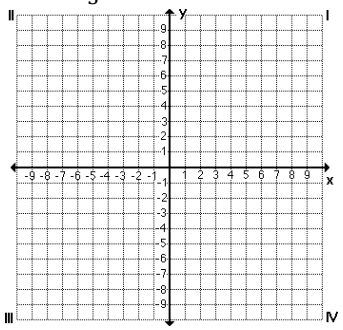
x-intercept:

y-intercept:

Max/Min Value:

End Behavior:

4. $y = -\frac{2}{3}x^2 - 4x + 1$



Vertex:

A.O.S.:

x-intercept:

y-intercept:

Max/Min Value:

End Behavior:

5. The path of a placekicked football can be modeled by the function $y = -0.026x(x - 46)$ where x is the horizontal distance (in yards) and y is the height (in yards). What is the football's maximum height?

Algebra 2 Unit 3 Review

Solve each equation

6. $-3y + 28 = y^2$

7. $6x^2 = 8x$

8. $x^2 = 6x - 4$

9. $7x - 3x^2 = 85 + 2x^2 + 2x$

10. $\frac{t^2}{20} + 8 = 15$

11. $3(x + 2)^2 + 10 = 3$

12. $4x^2 + 12x + 56 = 0$

13. $4x^2 + 11x + 3 = -3$

14. Find the x-intercepts of $f(x) = 3x^2 - 8x + 5$

Write the expression as a complex number in standard form

15. $-8 - (3 + 2i) + (7 + 5i)$

16. $(5 - 7i)(-4 + 3i)$

17. $5i(3 + 2i)(8 + 3i)$

18. $\frac{(5-3i)+(2+8i)}{(7+2i)-(11+4i)}$