Algebra II Name_____

Review *Quadratic Functions Worksheet*

Find the equation of the axis of symmetry and the coordinates of the vertex of the graph of each function.

1) $y = 2x^2 + 4$ AOS:_____ Vertex:_____

2) $f(x) = 2x^2 + 4x - 5$ AOS:_____ Vertex:_____

3) $y = x^2 - 8x - 9$ AOS:_____ Vertex:_____

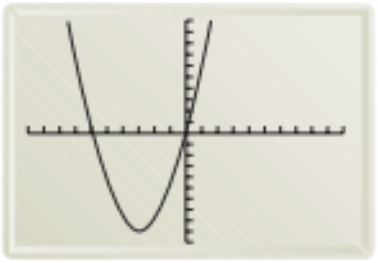
4) $y = 3x^2 - 9x + 5$ AOS:_____ Vertex:_____

Match each graph with its function.

A. $y = x^2 - 6x$ **B.** $y = x^2 + 6x$ **C.** $y = -x^2 - 6x$

D. $y = -x^2 + 6x$ **E.** $y = -x^2 + 6$ **F.** $y = x^2 - 6$

5.



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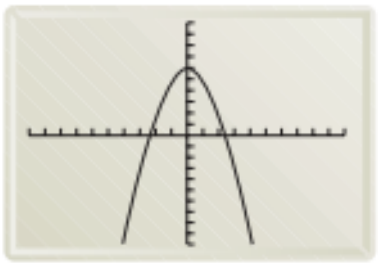

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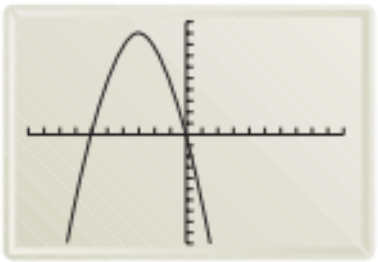

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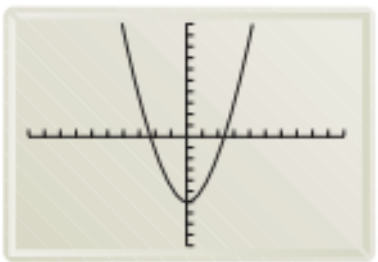

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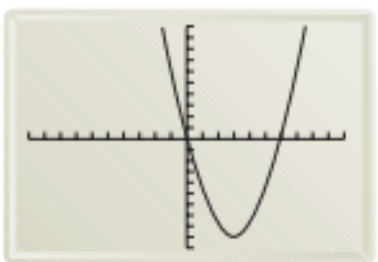

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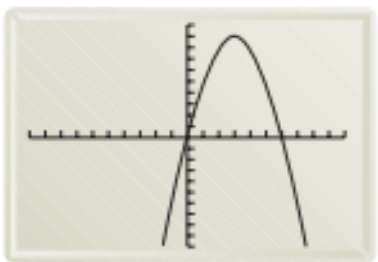
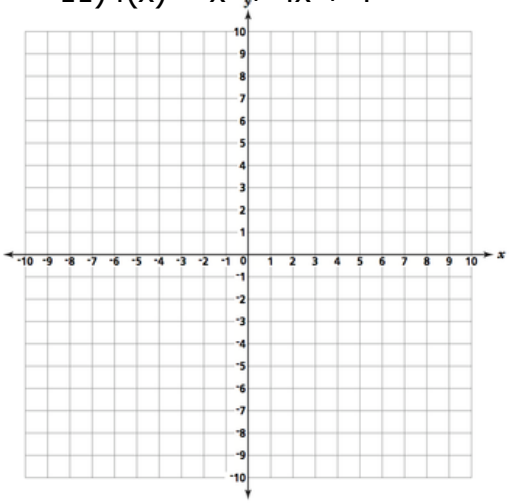
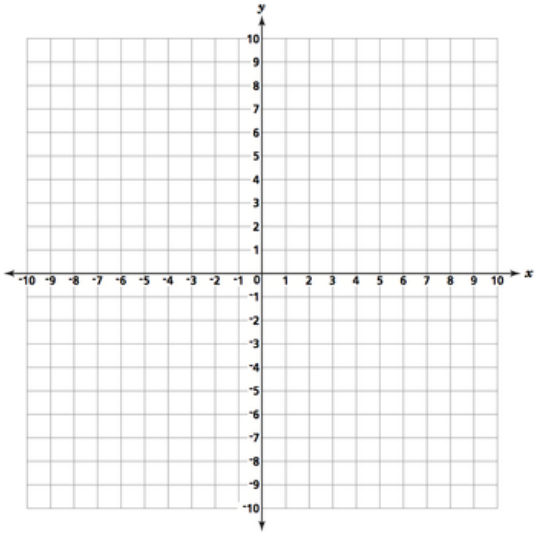


Do not use a calculator for qusestions 11 – 14. Graph each function. On the graph, label the axis of symmetry and the vertex. SHOW YOUR WORK!!!

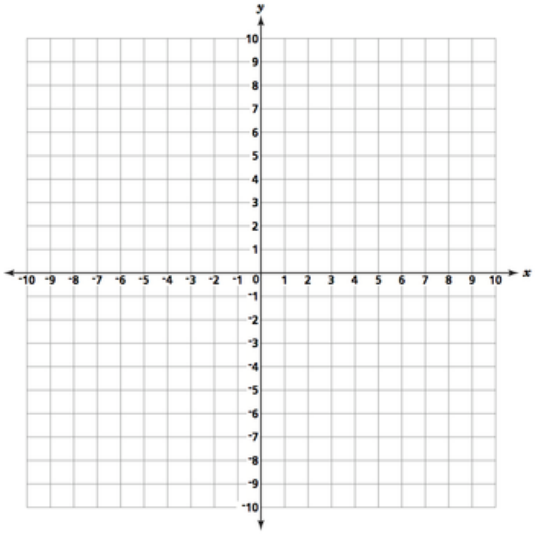
11) $f(x) = x^2 + 4x + 4$



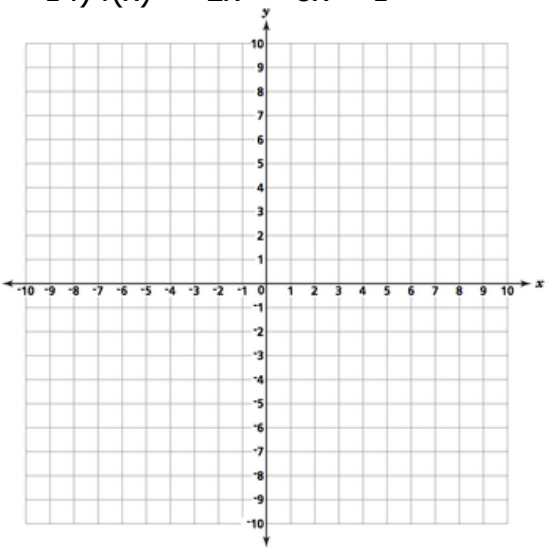
12) $y = x^2 - 6x$



13) $y = -x^2 + 4x - 4$



14) $f(x) = -2x^2 + 8x + 1$



15) A ball is thrown in the air with an upward velocity of 40ft/s. Its height in feet after t seconds is given by the function $h = -16t^2 + 40t + 6$.

a) In how may seconds does the ball reach its maximum height?

b) What is the ball's maximum height?