Algebra 1 Name_____

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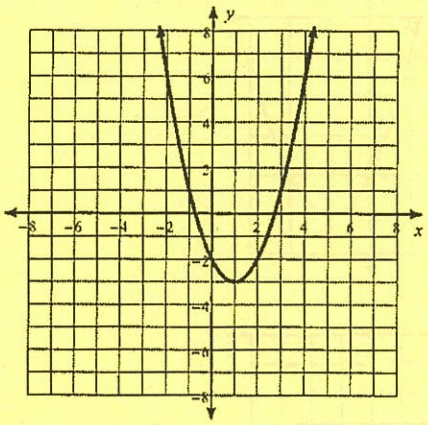
Unit Review: Graphing Quadratics Date_____ Period____

Find the vertex.

1) $y = (x - 3)^2 - 4$

2) $y = -2x^2 - 12x - 15$

3)



4) $y = -x^2 + 8x - 15$

5) Rewrite the following into vertex form by completing the square: $y = x^2 - 8x - 9$

6) Rewrite the following into vertex form by completing the square: $y = 3x^2 - 6x - 4$

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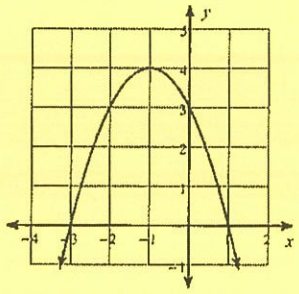
Sketch the graph of each function.

7) $y = x^2 + 6x + 12$

A)



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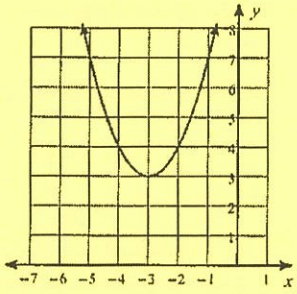

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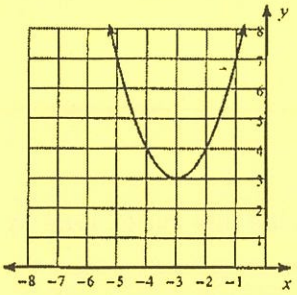

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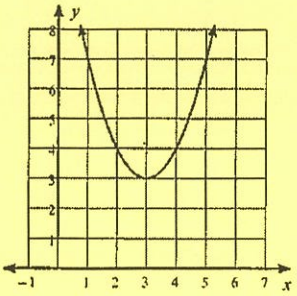
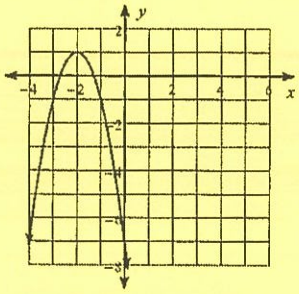


8) $y = -x^2 + 2x - 4$

A)



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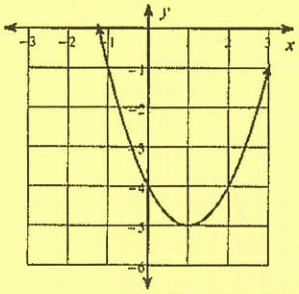

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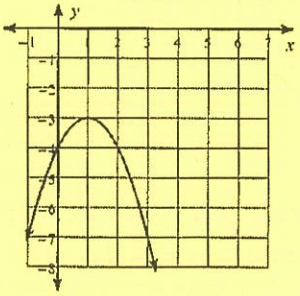

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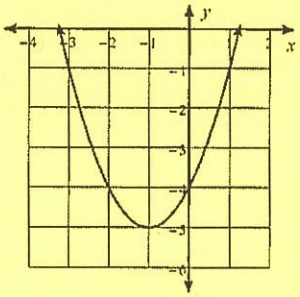

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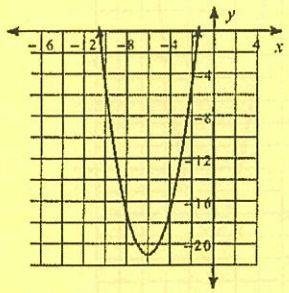
9) $y = 3(x - 2)^2 + 3$

A)



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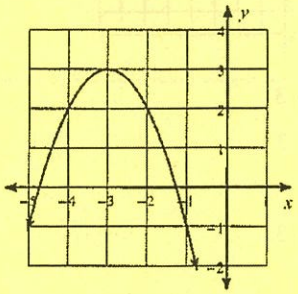

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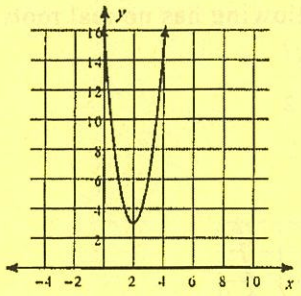

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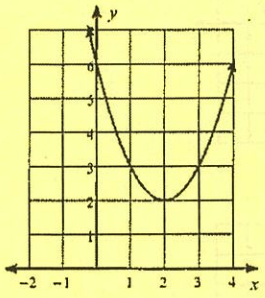
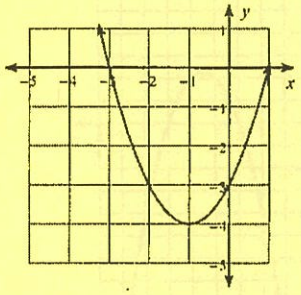


10) $y = -\frac{1}{4}(x + 4)^2 + 1$

A)



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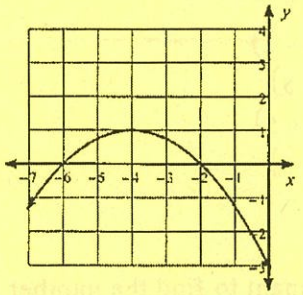

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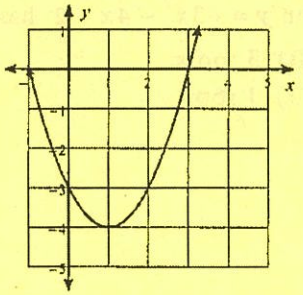

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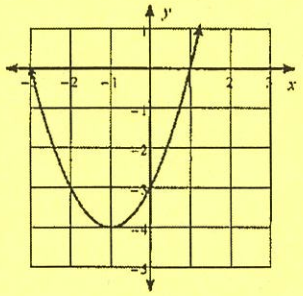

11) Rewrite the following into standard form:
$y = (x - 3)^2 - 1$

12) Write an equation whose roots are −3 and 3

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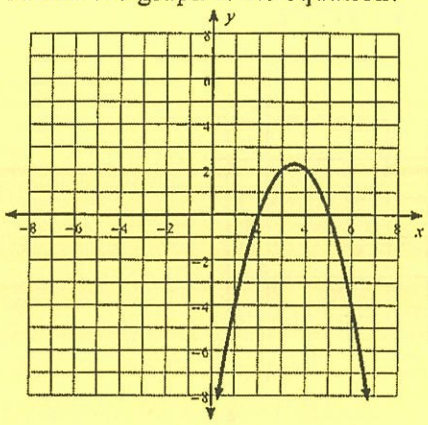
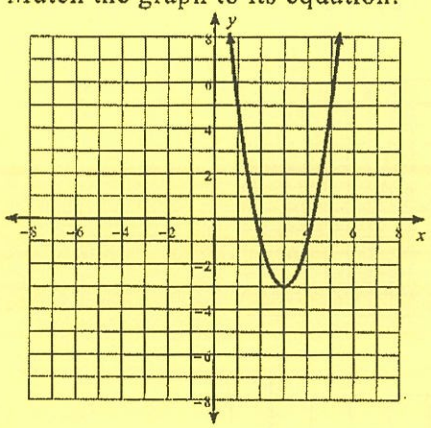
13) Match the graph to its equation:



A) $y = -(x - 2)(x - 5)$
B) $y = (x + 2)(x + 5)$
C) $y = -(x + 2)(x + 5)$
D) $y = (x - 2)(x - 5)$

14) Match the graph to its equation:



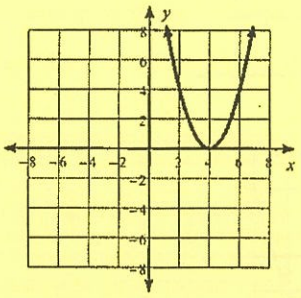
A) $y = 2(x - 3)^2 - 3$
B) $y = 2(x + 3)^2 - 3$
C) $y = -2(x - 3)^2 - 3$
D) $y = 2(x - 3)^2 + 3$

15) Use the discriminant to find the number of roots the equation $y = -3x^2 - 4x + 2$ has.

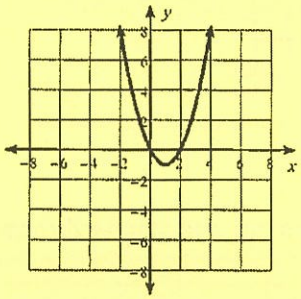
A) 2 roots
B) 3 roots
C) 0 roots
D) 1 root

16) Which of the following has no real roots (no x-intercepts)?

A) $y = 3x^2 - 4x + 2$
B) $y = 3x^2 - 6x + 2$
C)



D)



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