Unit 3A Test Remediation Packet DUE **NO LATER** THAN **FRIDAY 3-24**

Name:_____

You received a _____ on your Unit 3A test. You are being given the opportunity to repair this test grade up to a 75. To repair this grade you will need to complete this 3A remediation packet. This packet will be graded for **WORK** and **ACCURACY**. You may turn it in **EARLY** to get checked off so if any corrections need to be made you can still fix them before the due date. NO CORRECTIONS after 3-24

Unit 3A TEST REMEDIATION PACKET Name:_____

Graph each function, describe the transformations, and analyze the characteristics

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

Vertex:_____ Reflection?:_____

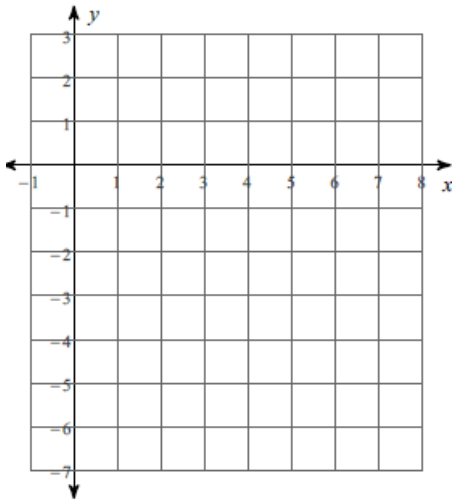
Max/Min: _____ Stretch/Shrink:_____

A.O.S.: _____ Horizontal:_____

Zeros: _____ Vertical:_____

Int of increase:_____

Intl of decrease: _____



2. $y = (x-3)^2 + 1$

Vertex:_____ Reflection?:_____

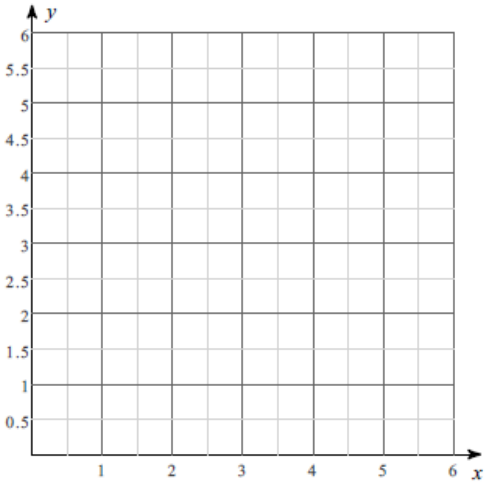
Max/Min: _____ Stretch/Shrink:_____

A.O.S.: _____ Horizontal:_____

Zeros: _____ Vertical:_____

Int of increase:_____

Intl of decrease: _____



3. $f(x) = -2x^2 - 16x - 31$

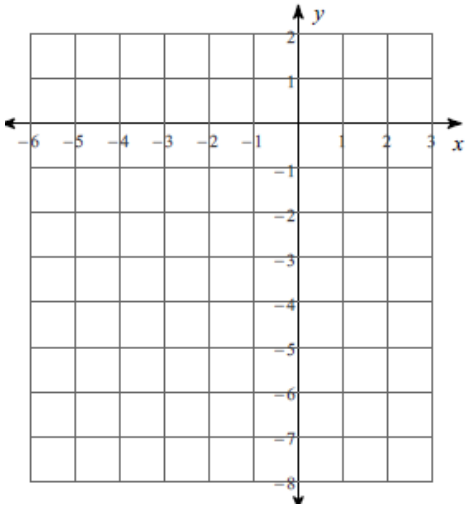
Vertex:_____

Max/Min: _____

A.O.S.: _____

Int of increase:_____

Intl of decrease: _____



4. $y = 4x^2 + 24x + 32$

Vertex:_____

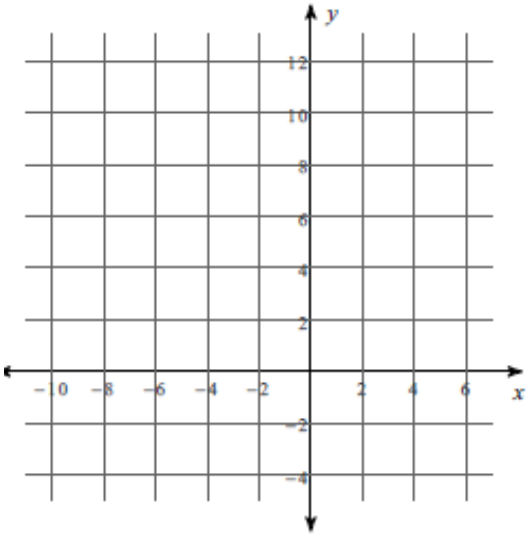
Max/Min: _____

A.O.S.: _____

Zeros: _____

Int of increase:_____

Intl of decrease: _____



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

Vertex:_____

Max/Min: _____

A.O.S.: _____

Int of increase:_____

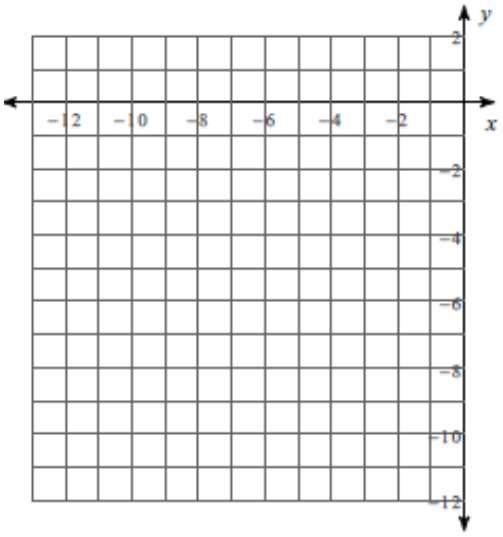
Intl of decrease: _____

Reflection?:_____

Stretch/Shrink:_____

Horizontal:_____

Vertical:_____



6. $y = x^2 + 4x + 1$

Vertex:_____

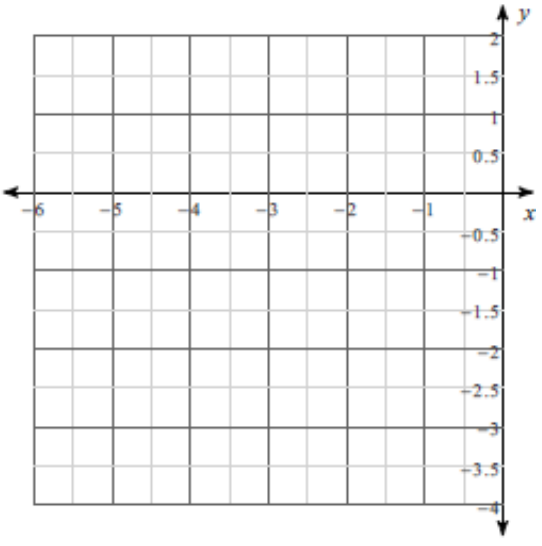
Max/Min: _____

A.O.S.: _____

Y-intercept: _____

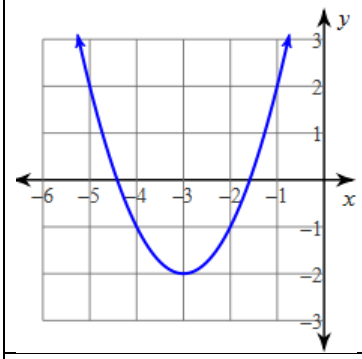
Int of increase:_____

Intl of decrease: _____



Write the Vertex Form of the equation for the following graphs.

7.



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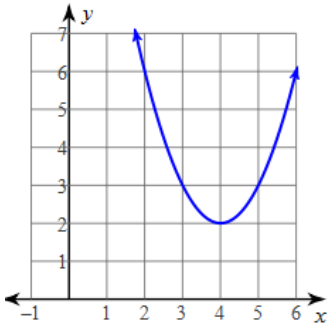

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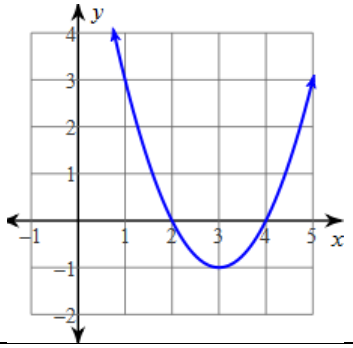

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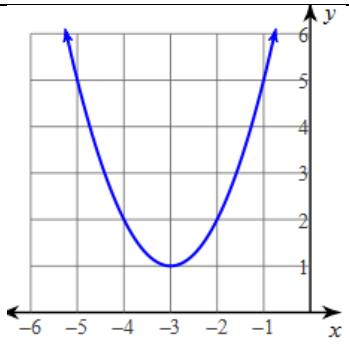

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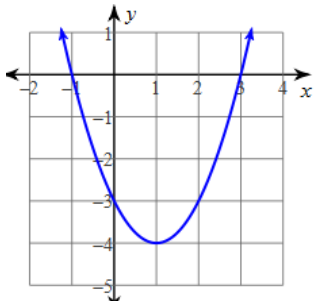
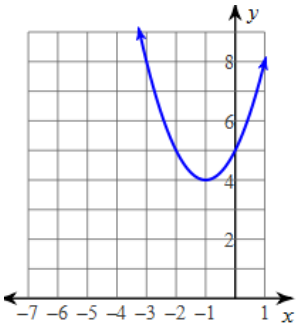


12.



Convert the following quadratic equations to vertex form:

13. $y = x^2 - 8x + 2$

14. $y = x^2 + 12x + 2$

15. $f(x) = x^2 + 10x + 19$

16. $f(x) = x^2 + 2x + 5$

Convert the following quadratic equations to standard form:

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

18. $y=-2(x-11)^2+17$

19. $f(x)=5(x+3)^2-1$

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

For each of the following **a**)determine the discriminant **b)** determine the NUMBER of solutions **c)** Use the quadratic equation to find the solutions

21) $2x^2-4x-48=0$	22) $9x^2-12x+4=0$

23) $3x^2 + 2x - 7 = 0$	24) $12x^2 + 9x + 8 = 0$
25) $2x^2 + 3x - 54 = 0$	26) $2x^2 + 12x + 5 = 0$
27) $7x^2 - 10x + 9 = 0$	28) $x^2 - 14x + 49 = 0$

vb

29. A toy rocket is launched vertically upward with an initial velocity of 128 feet per second, then its height h after t seconds is given by the equation $h(t) = -16t^2 + 128t$.

a. How long will it take for the rocket to hit the ground?

b. What height was the rocket launched from?

c. After how many seconds will the rocket be 112 feet above the ground?

d. How long will it take the rocket to hit its maximum height?

e. What is the maximum height the rocket reaches?