Honors Math II
Mid chapter 4 Review WS

Name_____
Period_____Date_____

Factor completely.

1. $9x^3 + 24x^2 - 20x$

2. $48n^2 - 474n - 60$

3. $9x^2 - 48x + 64$

4. $9m^3 + 3m^2$

5. $8x^2 + 6x - 9$

6. $18n^4 - 12n^3$

7. $10x^3 - 9x^2 - 9x$

8. $4x^2 - 25y^2$

9. $9x^3 - x$

10. $4x^2 + 121$

Solve for x. Find the sum of the solutions.

11. $4x^2 - 8x = 0$

12. $x^2 + 25 = 0$

Solve for x.

13. $9x^2 - 36 = 0$

14. $16x^2 + 72x = -81$

15. $15x^2 + 7x = 2$

16. $6x^3 - 7x^2 - 5x = 0$

Solve for x.

17. $(3x + 2)^2 - 49 = 0$

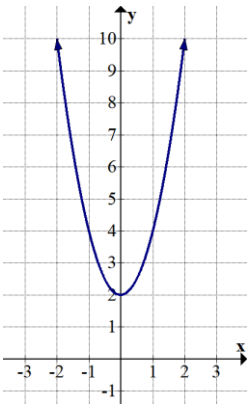
18. $2(x + 2)^2 - 72 = 0$

19. $3(x + 2)^2 = 18$

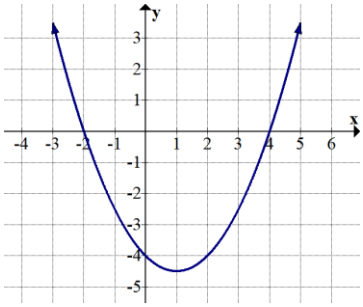
20. $\frac{2}{3}(x + 8)^2 - 66 = 0$

Write the equation for the following graphs.

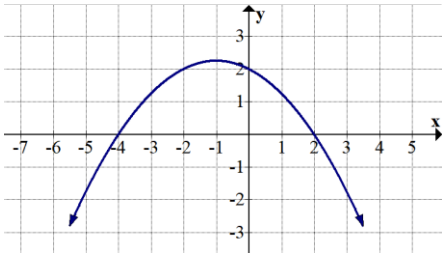
21.



22.



23.

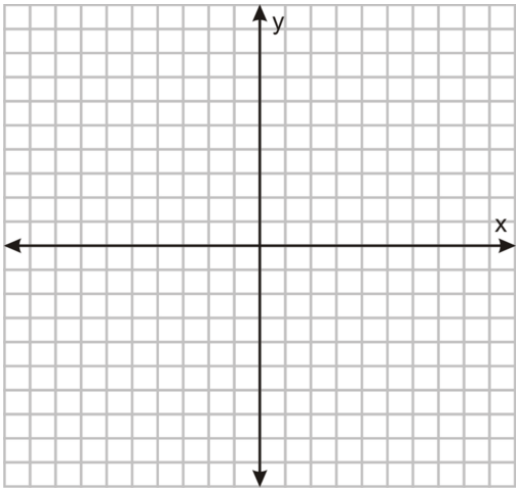


Graph the following equations.

24. $f(x) = x^2 + 8x + 15$

x-intercept(s):

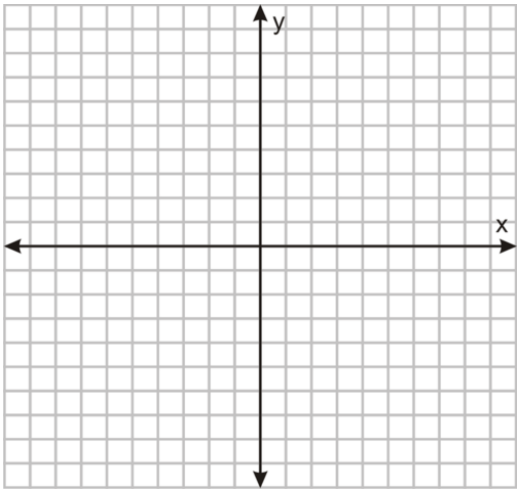
y-intercept:



25. $g(x) = x^2 + 1$

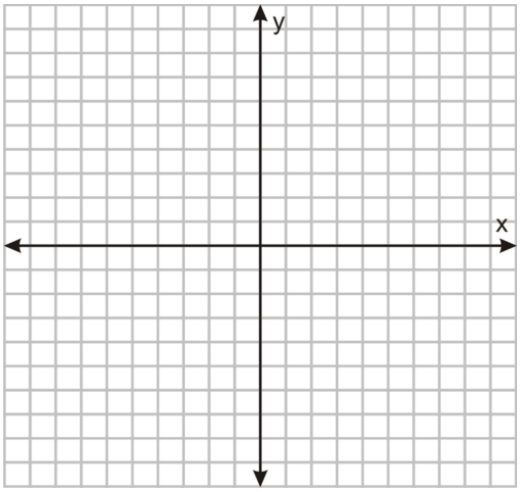
x-intercept(s):

y-intercept:



26. $f(x) = -(x-3)^2 + 6$

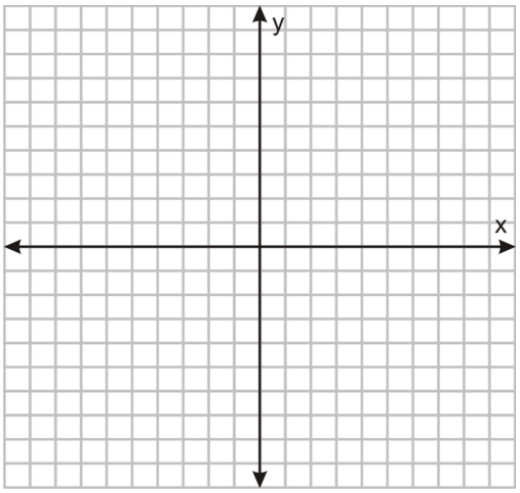
Write the end behavior and interval of increase and decrease.



27. $f(x) = \frac{1}{2}(x+1)(x-3)$

Vertex:

Max/Min:

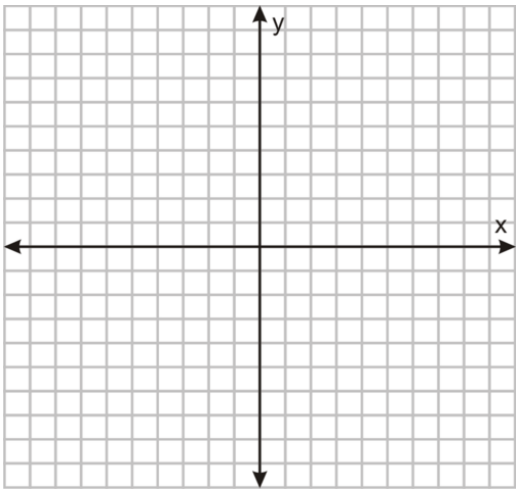


Graph the following equations.

28. $f(x) = -x^2 + 2x + 3$

x-intercept(s):

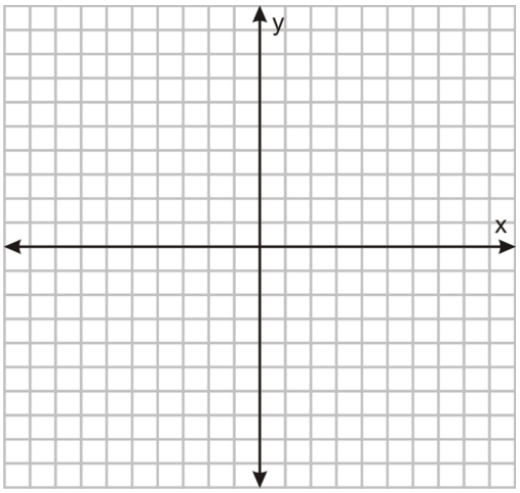
y-intercept:



29. $g(x) = -2(x-4)^2$

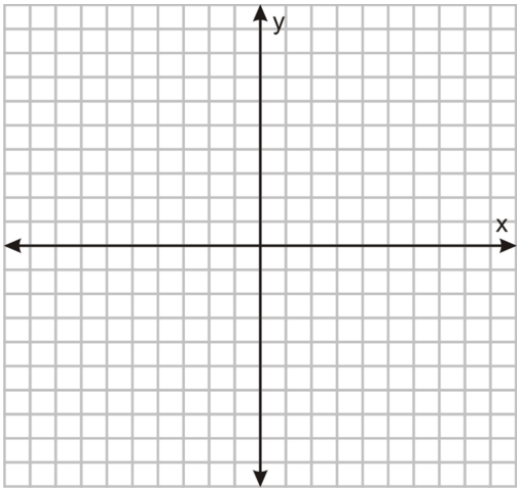
x-intercept(s):

y-intercept:



30. $f(x) = -(x-2)^2 + 8$

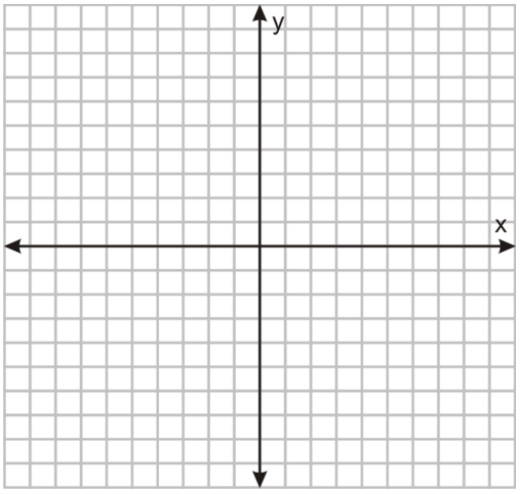
Write the end behavior and interval of increase and decrease.



31. $f(x) = \frac{1}{2}(x+4)(x-2)$

Vertex:

Max/Min:



Write the quadratic equation in standard form for the given information.

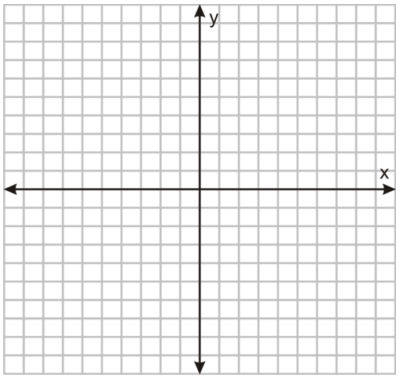
32. $(-6, 0), (2, 0), (0, -16)$

33. $(2, 0), (-2, 0), (0, 6)$

Write the quadratic equation for the given information.

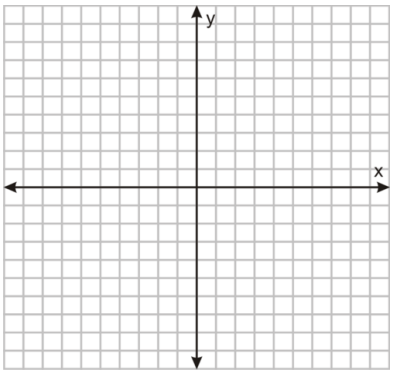
34.

x	y
-1	8
0	3
1	0
2	-1
3	0



35.

x	y
-6	-3
-5	2
-3	6
-1	2
0	-3



36. Write the equation in standard form for the quadratic equation with the given zeros and a leading coefficient of $\frac{1}{2}$. Zeros: $x = 2, x = -6$

37. Write the equation in standard form for the quadratic equation with the given zeros and a leading coefficient of -2. Zeros: $x = -1, x = -8$

38. Write the equation in intercept form for the quadratic equation with the given zeros and a leading coefficient of -3. Zeros: $x = 1, x = 4$