Honors Math II
Unit 4 day 4: writing equations

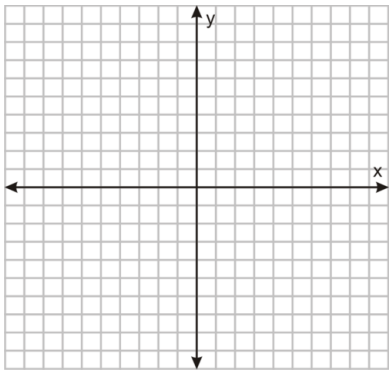
Name_____
Period_____Date_____

Graph the following equations.

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

x-intercept(s):

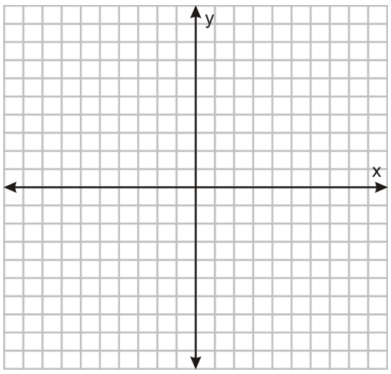
y-intercept:



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

x-intercept(s):

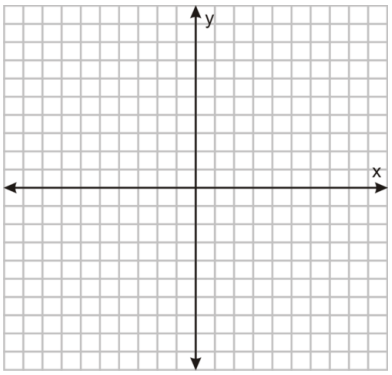
y-intercept:



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

x-intercept(s):

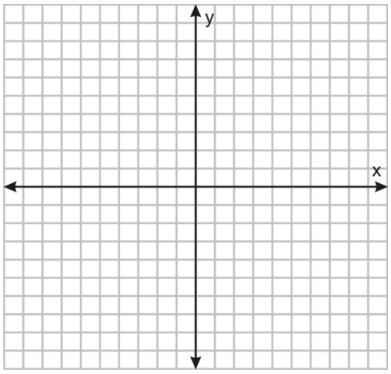
y-intercept:



4. $f(x) = (x+2)^2 - 7$

x-intercept(s):

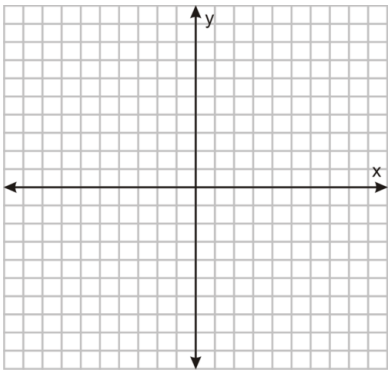
y-intercept:



5. $g(x) = -3(x-3)^2$

Vertex:
Max/Min:

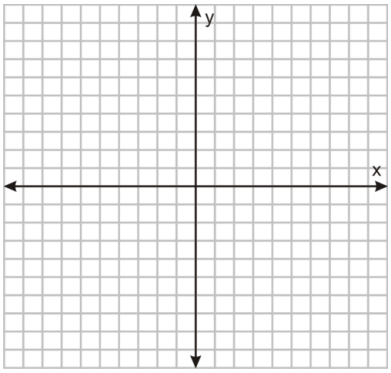
Write the end behavior and interval of increase and decrease.



6. $f(x) = x^2 - 4x - 12$ (hint: factor)

Vertex:
Max/Min:

Write the end behavior and interval of increase and decrease.

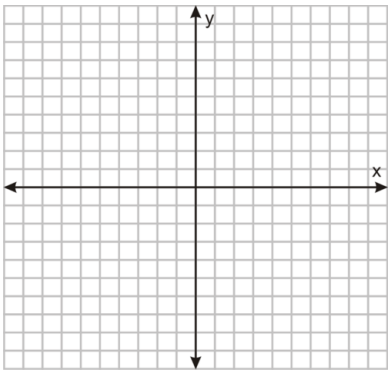


7. $f(x) = (x-4)(x+6)$

Vertex:
Max/Min:

x-intercept(s):

y-intercept:

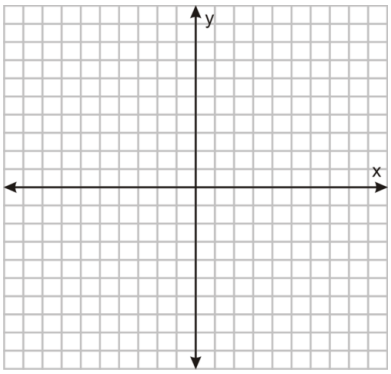


8. $f(x) = -2(x-6)(x-1)$

Vertex:
Max/Min:

x-intercept(s):

y-intercept:



Write the quadratic equation for the given information.

9. $(-4, 0), (2, 0), (0, -16)$

10. $(2, 0), (-8, 0), (0, -8)$

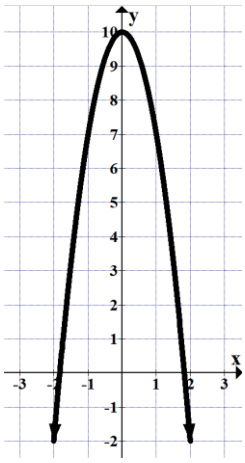
11.

x	y
0	8
1	3
2	0
3	-1
4	0

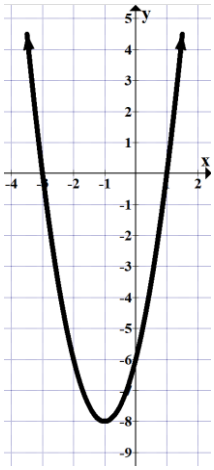
12.

x	y
2	7
3	-2
4	-5
5	-2
6	7

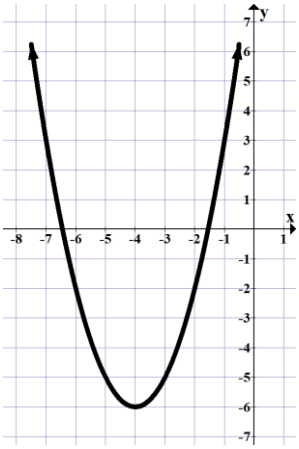
13.



14.



15.



16. Write the equation for the quadratic equation with the given zeros and a leading coefficient of 1. Zeros: $x = 4, x = -8$

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

18. Write the equation for the quadratic equation with the given zeros and a leading coefficient of $\frac{1}{3}$. Zeros: $x = 4, x = -8$

Solve for x by factoring.

19. $4x^2 + 10x - 24 = 0$

20. $6x^3 + 22x^2 - 8x = 0$

21. $x^2 + 64 = 0$

22. $2x^3 - 8x = 0$

23. $11x^2 + 18x = -7$

24. $x^2 - 14 = 0$

25. $9x^2 - 30x = -25$

26. $4x^2 + 121 = 0$

27. $25x^2 - 64 = 0$

28. $x^2 = -5x + 6$

29. $4x^3 + 24x^2 + 20x = 0$

30. $15x^2 = -7x + 2$

Without graphing find the x-intercept(s) and y-intercept.

31. $y = \frac{1}{3}(x - 2)^2 + 9$

32. $y = -2(x - 5)^2 + 24$

33. $y = 5x^2 - 4x - 12$

34. $y = x^2 + 13x - 48$