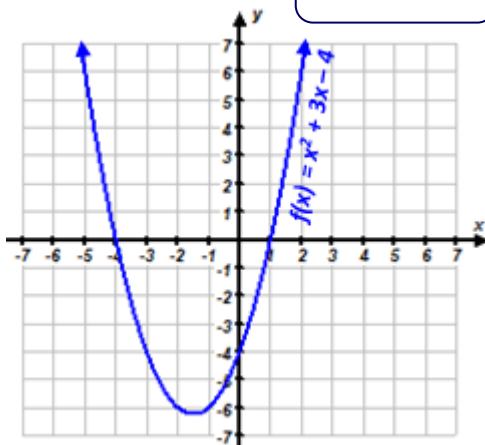


Sec 6.6 – Mathematical Modeling
Solving Equations By Graphing

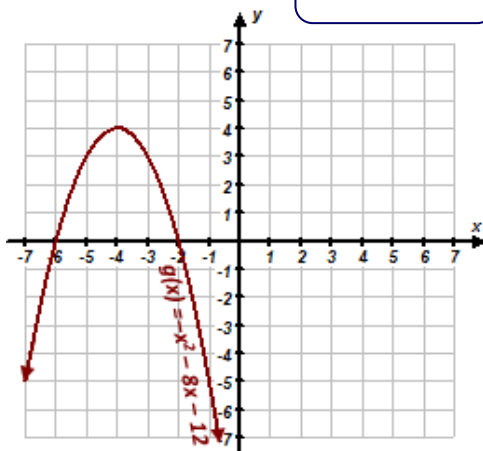
Name: _____

1. Solve the following equations using their graphs.

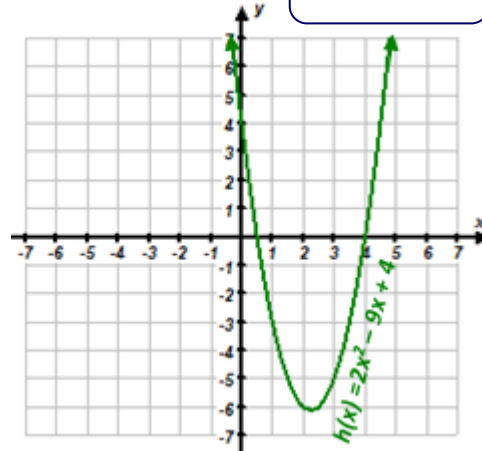
a. $x^2 + 3x - 4 = 0$



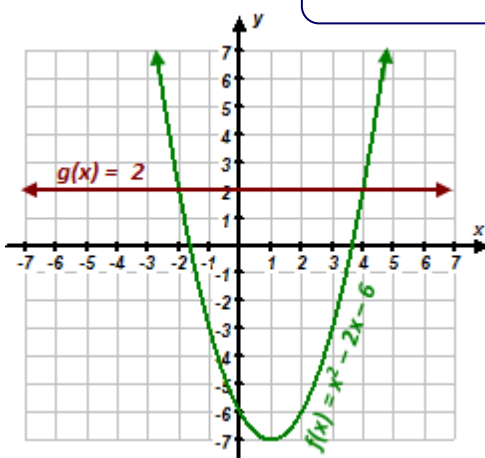
b. $-x^2 - 8x - 12 = 0$



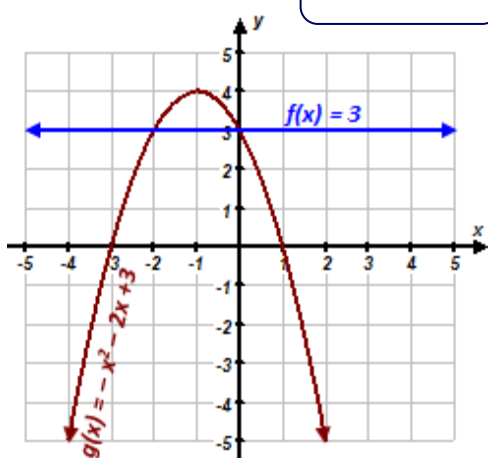
c. $2x^2 - 9x + 4 = 0$



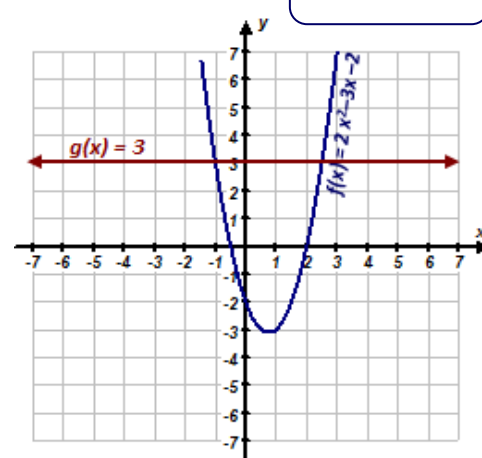
d. $x^2 - 2x - 6 = 2$



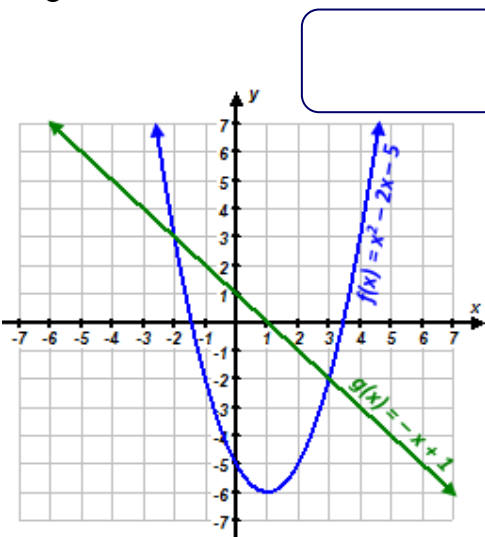
e. $-x^2 - 2x + 3 = 3$



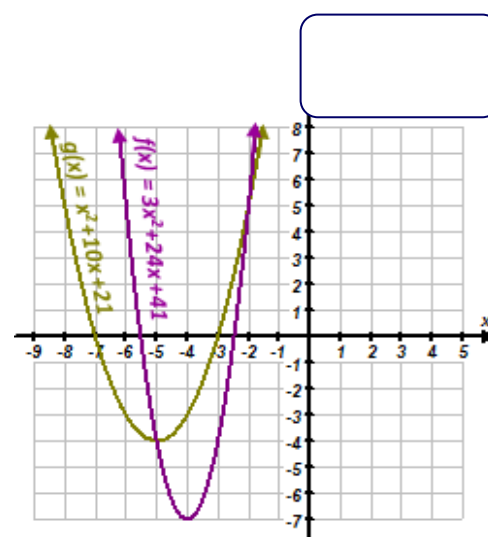
f. $2x^2 - 3x - 2 = 3$



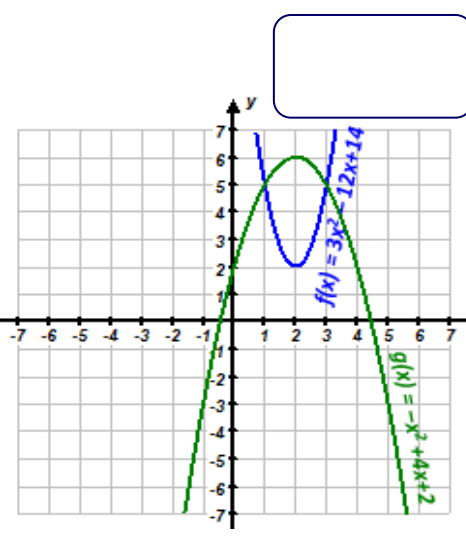
g. $-x^2 - 2x - 5 = -x + 1$



h. $x^2 + 10x + 21 = 3x^2 + 24x + 41$

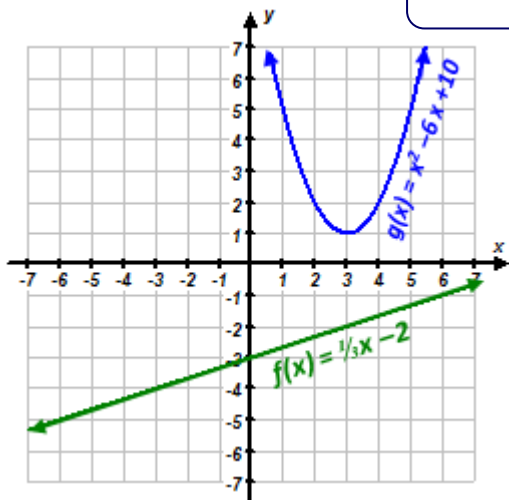


i. $3x^2 - 12x + 14 = -x^2 + 4x + 2$

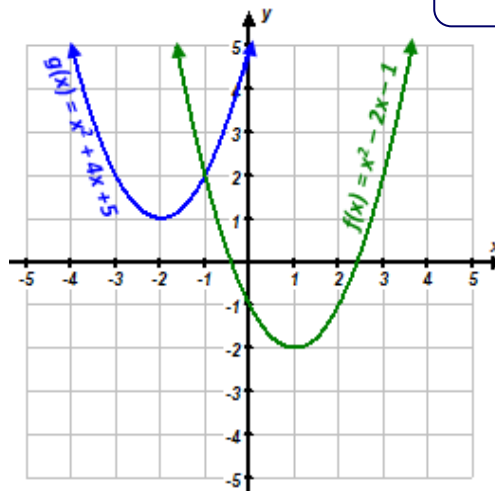


2. Solve the following Quadratic Equations using their graphs.

a. $x^2 - 6x + 10 = \frac{1}{3}x - 2$



b. $x^2 + 4x + 5 = x^2 - 2x - 1$



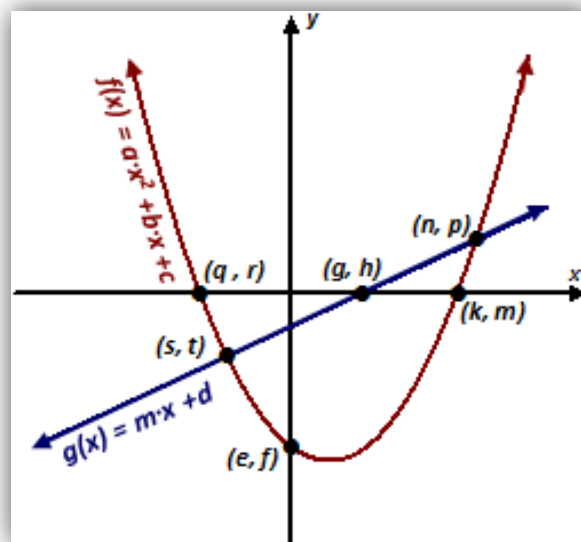
3. Consider the functions $f(x) = a \cdot x^2 + b \cdot x + c$ and $g(x) = m \cdot x + d$. Given a, b, c, d are all constants, answer the following:

a. For which values of x does: $a \cdot x^2 + b \cdot x + c = m \cdot x + d$

b. For which values of x does: $a \cdot x^2 + b \cdot x + c = 0$

c. For which values of x does: $m \cdot x + d = 0$

d. What is the value of $f(0)$?



b. Solve the following Quadratic Equations using graphing and your TI-84/83 "Intersect" command

a. $x^2 - 3x + 2 = 2x - 3$

(to the nearest hundredth)

b. $x^2 - 2 = 3x + 1$

(to the nearest hundredth)

c. $x^2 - 2x - 5 = 2^x - 2$

(to the nearest hundredth)