

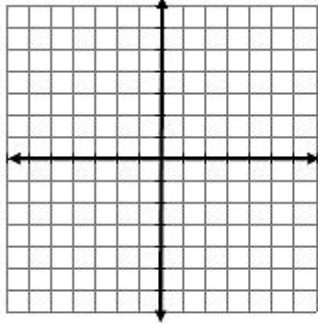
Math 2 Unit 11 Worksheet 7
Systems of Equations

Name: _____
Date: _____ **Per:** _____

[1-4] Find all solutions to $f(x) = g(x)$. a) Solve by graphing, and b) solve algebraically using substitution.

1. $f(x) = 2x - 5$ and $g(x) = -\frac{1}{3}x + 2$

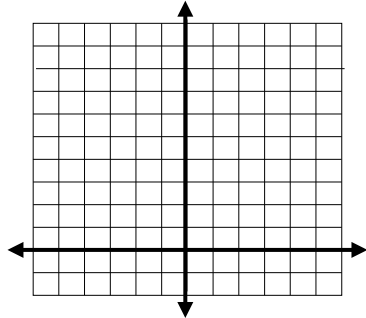
a) $f(x) = g(x)$ at (____, ____)



b) Solve the system algebraically to find when $f(x) = g(x)$.

2. $f(x) = 2x^2 + 1$ and $g(x) = -2x + 5$

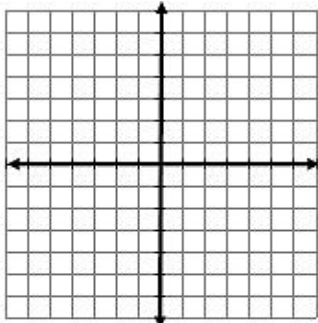
a) $f(x) = g(x)$ at (____, ____) and (____, ____)



b) Solve the system algebraically to find when $f(x) = g(x)$.

3. $f(x) = -x^2 + 4$ and $g(x) = 3x + 4$

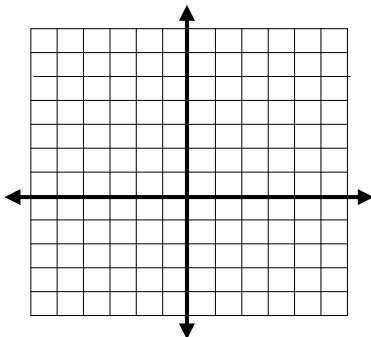
a) $f(x) = g(x)$ at (____, ____) and (____, ____)



b) Solve the system algebraically to find when $f(x) = g(x)$.

4. $f(x) = -2x + 4$ and $g(x) = (x - 2)^2 - 3$

a) $f(x) = g(x)$ at (____, ____) and (____, ____)



b) Solve the system algebraically to find when $f(x) = g(x)$.

[5-12] Find all values of x for which $f(x) = g(x)$. Solve algebraically.

5. $f(x) = -x - 7$

$$g(x) = x^2 - 4x - 5$$

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

$$g(x) = 7x + 2$$

7. $f(x) = -14x + 94$

$$g(x) = x^2 - 13x + 52$$

8. $f(x) = 2x + 2$

$$g(x) = -x^2 + 4x + 1$$

9. $f(x) = 3x - 5$

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

10. $f(x) = 5x - 1$

$$g(x) = x^2 - 1$$

11. $f(x) = -3$

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

12. $f(x) = 2x - 4$

$$g(x) = (x - 2)^2 + 3$$

13. Based on your answer for problem 12, what do you know about the graphs of these two functions?