Name _____ Date _____

Mr. Schlansky Algebra II

Solving Systems Graphically Using TI

For each of the following pairs of functions:

a) **Find all points of intersection, rounding to the nearest hundredth**

b) **Find all values that satisfy $f(x) = g(x)$ rounding to the nearest thousandth**

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

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

3. $f(x) = \log_3 x$
   $g(x) = (x-5)^2$

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

5. $f(x) = 2^x$
   $g(x) = (x-8)^2$

6. $f(x) = \log_7(x) + 2$
   $g(x) = -\frac{1}{8}x + 10$

7. $f(x) = \sqrt[3]{x^2 - 8} + 9$
   $g(x) = 2|x| - 2$

8. $f(x) = 0.4x^5 - 4x^3 + 9x$
   $g(x) = 5(2)^x - 8$

9. $f(x) = 100(1.16)^x$
$g(x) = 5x^2 + 50$

10. $f(x) = 800(0.8)^x$
$g(x) = 200(1.2)^x$

11. $f(x) = 2000 \ln x$
$g(x) = .8(x - 52)^2$

12. $f(x) = 2246 - 71 \ln x$
$g(x) = 2155 - 31 \ln x$

13. $f(x) = .12x^3 - 3x^2 - 12$
$g(x) = -\log_4 x - 50$

14. $f(x) = 12\sqrt{x + 100} + 57$
$g(x) = -\frac{1}{2} | x | + 212$

15. $f(x) = -.1(x + 23.2)^2 + 1492$
$g(x) = 2.9 | x + 50 | + 739.6$

16. $f(x) = 12000(.64)^x$
$g(x) = 9000(1.14)^x$