Practice – Solving Quadratics by Graphing
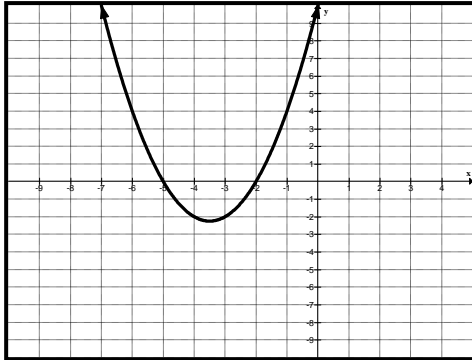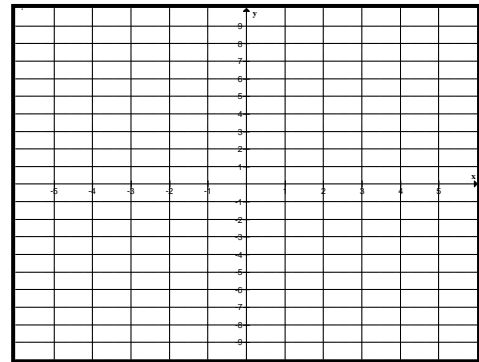
Name _____ Date _____ Period_____

1. What are the roots of the function graphed below?

2. Complete the table including the solution(s) of the quadratic. Then graph the quadratic equation.

   $x^2 + 5x = -6$

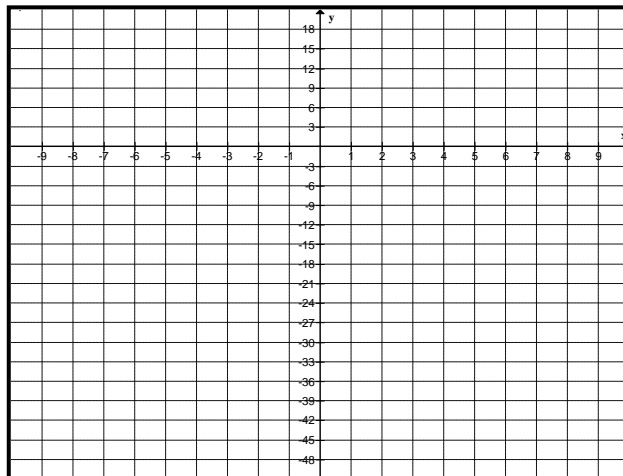 | x | | | | | |
   |-----|--|--|--|--|--|
   | y | | | | | |

   Solutions: _____

3. What are the zeros of the function $f(x) = 2(x+8)(x-4)$?

4. What are the x-intercepts of the graph of the equation $2x^2 - 3x - 5$?

   Solve each equation by graphing and state the roots.

5. $x^2 - 49 = 0$

   Roots:

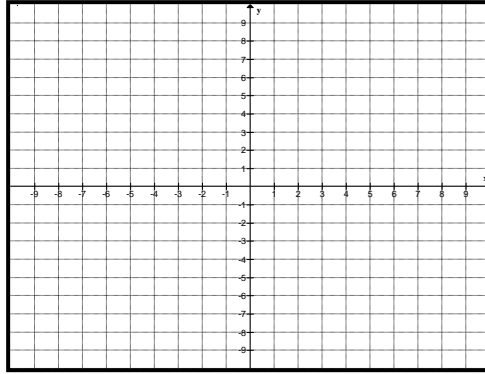   _____

Solve each equation by graphing and state the roots.

6. $9x = -x^2 - 18$

Roots:

_____

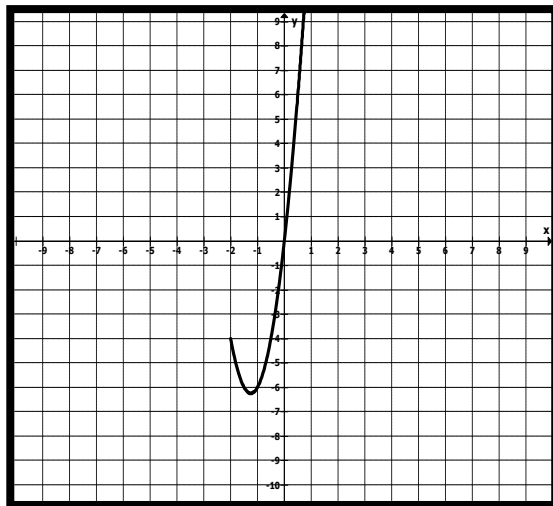**Solve each equation using the graphing calculator.**

7. $3x^2 - 8x + 4 = 0$

8. $2x^2 = -7x$

9. $-x^2 - 18 = 7x$

10. $-x^2 - 10x = 25$

11. Part of the graph of a quadratic equation is shown below. If the line of symmetry for this quadratic equation is $x = -1.25$, between which two integers will the other part of the graph intersect the *x*-axis?

12. The sum of the squares of two consecutive integers is 41. Find the integers.

13. A softball league has *t* teams and each team plays all the other teams in the league twice. The total number of games played, *g*, is shown by $g = t^2 - t$. If the softball league plays a total of 72 games, how many teams are in the league?

14. Seven less than 4 times the square of a number is 18. Find the number.

15. The length of a rectangle is 3 cm more than the width. The area is 70 cm². Find the dimensions of the rectangle.