Math 20-2
Show all your work for full marks.

1. Solve by Graphing.
   - Three of them need to be solved by Method 1 (both sides go into your calculator)
   - Three need to be solve by Method 2 (everything to one side so that one side equals zero).
   - Include a sketch for each question.

a. $x^2 + 10 = -7x$

b. $x^2 - x = 12$

c. $x^2 = -3x + 4$

d. $3x^2 + x = -4x + 5$

e. $5x^2 - 2x - 1 = -x - 7$

f. $13x^2 + 35x + 21 = -12x^2 - 25x - 15$

2. Solve by Factoring or Quad Formula.

a. $4x^2 + 15x + 9 = 0$

b. $2y^2 + 4y - 30 = 0$

c. $x^2 - 49 = 0$

d. $6x^2 + 13x - 5 = 0$

3. Solve with the quadratic formula – exact answers for two and round to two decimal places (hundredths) for two.

a. $3x^2 + 6x + 1 = 0$

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

c. $x^2 - 50 = 0$

d. $x^2 - 2x - 5 = 0$

4. The graph of a quadratic function has *x*-intercepts –10 and 2. Write a quadratic equation that has these roots. The 'a' value is 1.

5. The graph of a quadratic function has *x*-intercepts $\frac{1}{5}$ and -2. Write a quadratic equation that has these roots. The 'a' value is 1.