Solve the following equations:

1. (2pts) 2(x+4)-4=3x-5

2. (3pts) Solve for t: A = P(1 + rt)

- 3. (4pts) The line 3x+2y=5 is given.
- a) Find the x- and y-intercepts of the line.
- b) Sketch the line in a coordinate system.

4. (4pts) Find the equation of the line that contains (-1,3) and is parallel to the line 4x - 2y = 5.

5. (4pts) Verify that the triangle whose vertices are $A=(-6,3),\ B=(3,-5)$ and C=(-1,5) is a right triangle.

Solve the following equations:

6. (4pts)
$$x^2 + 2x - 3 = x - 2$$

7. (5pts)
$$x - 3 = \sqrt{24 - 4x}$$

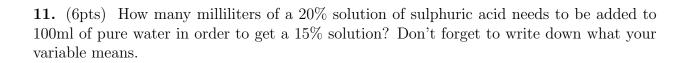
8. (4pts) Find the equation of the circle that is tangent to both x- and y-axes, has radius 3 and lies in the fourth quadrant. Sketch the circle.

9. (5pts) The equation $y = x^5 - 4x^2 + 3$ is given.

a) Use your calculator to accurately sketch the graph of the equation on paper. Indicate your viewing window.

b) Find the greatest x-intercept accurate to two decimal points. What is the y-intercept?

10. (4pts) Solve the equation by completing the square: $x^2 - 8x + 6 = 0$



12. (5pts) Alonso has \$100,000. He can invest in a B-rated bond that pays 12% per year and a Certificate of Deposit that pays 7% per year. How much should be invested in each to realize interest of \$10,000 per year? Don't forget to write down what your variable means.

Bonus (5pts) Solve: $x^6 + 3x^3 - 40 = 0$.