8pts   1. Solve the following system of equations   8pts 2. Solve the following system of equations
       by substitution   by elimination

       $3x + 2y = 6$ $7x - y = 2$
       $y = 2x - 11$ $2x + 5y = 27$

8pts 3. There are 25 coins in a child's piggy bank that total $4.45. The coins are all either quarters or nickels.
       Set up a system of equations and solve it to determine how many of each type of coin there is.

8pts   4. If the national consumption function is given by $C = 0.5y + 12$ (in billions of dollars)
       a) What is the national consumption when disposable income is **$50**(billion)?

       b) What is the marginal propensity to consume?

8pts   5. Graph the solution to the system of inequalities $5x + 3y \leq 15, x \geq 0, y \geq 0$

8pts   6. Graph the solution to the system of inequalities $x \geq 0, y \geq 0, x + y \leq 8, y \geq 2x - 1$

6pts   7. Using your information from problem 6   Maximize $C = 5x + 7y$

       **If you did not do problem 6 then use the following ordered pairs (these are not the
       right ones) { (0,2) (1,4) (4,5) (3,4) }**

6pts 8.   Find the maximum value of the feasible region shown below using $C = 3x + 5y$
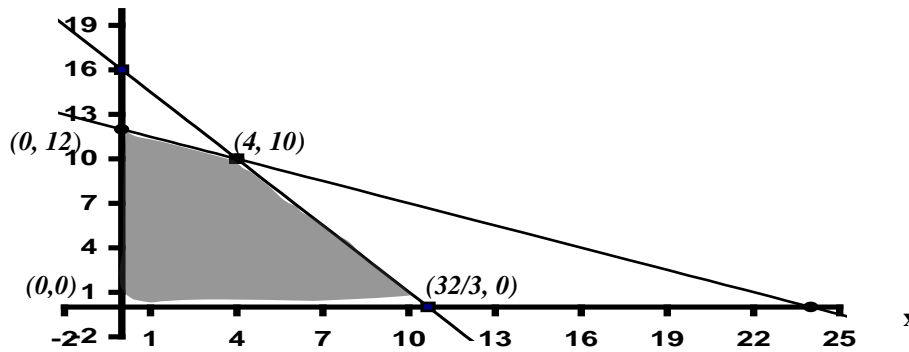
8pts 9. Using the quadratic formula: $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ find any solutions to $5x^2 + 19x = 12 + 2x$

8pts 10. Solve by factoring $x^2 - 21x + 54 = 0$

6pts 11. Graph $y = x^2 - 4x - 12$

axis of symmetry $x = \dfrac{-b}{2a}$

6pts 12. Graph $y = -x^2 + 9$

6pts 13. If the supply function for a commodity is $p = q^2 - 4q + 23$ and the demand function is
        $p = -2q^2 + 11q + 173$ find the equilibrium quantity and price.

6pts 14. Graph $y = x^3 + 2$