***Please complete the following Problems by Day 7 of Week 4.***

*Is (-2,6) a solution to 7x + 3y=4 AND 8x + 7y = 26?*

*Solve the system of equations by graphing.  If the system is inconsistent or the equations are dependent, state that.*

*y = 2x+1*

*y = -2x-3*

*Solve using the addition (elimination) method.*

*2x + 3y = -16*

*5x-10y=30*

*Solve using the addition (elimination) method*

*2y - 8 = -2x - 8x*

*8x - 3y = 31 + y*

*Solve using the substitution method*

*x = 3y + 7*

*x = 2y - 1*

*Solve using the substitution method*

*4x + 3y = 0*

*2x - y = 0*

*Solve using the addition method or the substitution method.  Explain why you selected one method over the other method.*

*4x + 13y = 6            x - 2 = 0*

*Solve using the addition method or the substitution method.  Explain why you selected one method over the other method.*

*2x - y = 10                y = 3x*

*Simon Rose surveyed feature films released from 1983 through 1993, listing the most common names of movie characters.  The list is shown here, but the number of characters with the names Jack and John is omitted.  Combined, there were 230 movie characters with these names.  Taking triple the number of Jack characters and subtracting double the number of John characters gives 16 less than triple the number of George characters.  How many movie characters had the names Jack and John from 1983 through 1993?*

***Name                Characters***

*Jack                     ?*

*John                     ?*

*Frank                    87*

*Harry                    72*

*David                    63*

*George                 62*

*Michael                59*

*Tom                     59*

*Mary                    54*

*Paul                     53*

*The calorie - nutrient information for an apple and an avocado is given in the table.  How many of each should be eaten to get exactly 1000 calories and 100 grams of carbohydrates?*

*One Apple                            One Avocado*

*Calories                                        100                                    350*

*Carbohydrates (grams)                   24                                        14*

*A hawk can fly 300 miles in 8 hours with the wind.  Flying against the wind, the hawk covers only one-third of the distance in 7 hours.  What is the rate of the wind?*

*Graph the solution:*

*3x+y > 6            y < -3x-2*

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