**Wk 5 – MTH 208 Quiz**

**Perform the following operation.**

1.        24 – (-17) + 3(13 – 19)

2.       34 – 6[19x - 15 - 3(5x – 9)]

3.       4/a + 5/b + 6/c

4.       7/(13x) - 2/39  +  5/(3x)

**Solve the following equations for x.**

5.       19x - 15 = 26x + 9

6.       x/9 = 3x/5   -   3

7.       6(5x - 7) + 19 = 5(7x +  11)

8.       3/(2x) – 4/(5x) = 5

9.         0.23x = 0.8(123 – 0.65x), answer in decimal form

**Solve the following equations for x and y or state that**

**there is no solution.**

10.     x - 3y = 5

 3x + 2y = 8

11.       2x + 7y = 4

4x - y = -3

12.     4x - 5y = -1

 3x - 4y = 6

13.     2x  –  5y   =  9

       x/5  +  y/2 =  3

14.     0.17x - 0.35y = 9

            3x + 5y = 67         answer in decimal form

15.    Find the slope and y intercept for the line going through the points (-6, 17) and (9, -4).

16.   Write the equation for a line that is parallel to the line,

y = -x/5 + 15, and goes through the point (-7, 11).

17.   Write the equation for a line that is perpendicular to the line,

y = 3x + 10, and goes through the point (-3, 5).

18.   Each year, Mr. Brown, a real estate salesman, has the option of selecting the method by which his salary will be determined. Option 1 is a straight 2.75% of his total sales and Option 2 is a weekly salary of $1500 plus 0.35% of his total sales. Determine the weekly sales (in dollars) needed for Option 1 to result in the same weekly income as Option 2.

19.   The Delicious Juice Company sells 8-ounce cans of apple juice for 50 cents and 8-ounce cans of apple drink for 26 cents. The company wishes to market and sell cans of juice drink for 36 cents that is part juice and part drink. How many ounces of each should be used if the juice drink is to be sold in an 8-ounce can?

20.  You are considering the purchase of a new car. Your choice is a fuel-efficient Toyota Prius for $21,100 or lower-cost Hyundai Accent for $12,925. The Prius gets 47 mpg (miles per gallon of gasoline) and the Accent gets 33 mpg. How many miles would you have to drive to make the two purchases equivalent?  Assume a gasoline price of $3.75/gallon.

21.   Graph the equation: 7y - 8x = 56 showing both plus and minus x values.

22.  Graph the equation: 3500x – 1500y = 10,000 showing both plus and minus x values.

23.  Graphically solve the following set of equations:

**5x + 2y = 5**

x/3  +  2y/5 = 3

24.  Graphically show the area that satisfies the inequality in 4 quadrants:

**7x – 2y < 13**

25.  Graphically show the area that satisfies the inequality in 4 quadrants:

9x - 5y < -45