Name: _____

Instructions: *Write your name before you begin the test. Show the work to each problem in a clear and organized manner and box your final answer. If you don't show your work on the exam, please indicate where I might find the work, and label it clearly. If there is no work shown for a problem it will be entirely correct or entirely incorrect! Word problems must show all work in the manner that has been shown in class to receive full credit – an answer only may not receive full credit. Work carefully. Good Luck!!*

1. Define the variable, give the equation and solve.
    Five times the sum of a number and 2 is equal to 34 less the number.

2. Divide
    $$\frac{21x^2}{10y} \div \frac{14x}{25y}$$

3. Subtract
    $$\frac{14}{19} - \frac{3x}{19}$$

4. Add

$$\frac{1}{12} + \frac{5}{x}$$

5. Simplify

$$\frac{1 - \dfrac{y}{3}}{2 + \dfrac{5}{6}}$$

6. Solve

$$\frac{x}{5} - \frac{1}{2} = 1$$

7. Simplify
$$9y + 12 - 5 - 12y$$

8. Find the circumference of a circle if the radius is 3 m. Use $\pi = 3.14$
   (Recall that C=πd)

9. Write the following using scientific notation

   a) 0.00025

   b) 12,050

10. Write the following in standard form

    a) 5.1702×10^3

    b) 7.02×10^{-2}

11.   Use an algebraic setup with a missing factor to set up the following. **Don't solve!**
           A pound of fertilizer covers 39 square feet of lawn, Vivian Bulgakov's
           lawn measures 7883.5 square feet. How much fertilizer, to the nearest
           tenth of a pound, does she need to buy?

12.   Find the value of the following expression.
           $^3/_8$ (4.7 − 5.9)

13.   Solve
           1.5y + 3.1 − 1.1y = 0.2y − 0.1

14.   Find the square root of the following.

       a) $\sqrt{81}$

       b) $\sqrt{-8}$