Name:_____

Practice Test #1
Beginning Algebra – M110

Instructions: *You may **not use a calculator** on this test so don't use one to practice. All work must be shown in order to receive all points for all questions so practice showing all work. Practice **boxing your final answer**. Any answer that is a fraction must be in lowest terms and as mixed number for full credit. Since you can use a 5x8 notecard on the test use your notecard to practice or make one based on the problems you got wrong. Happy studying!*

1. Find the prime factorization for the following. Factorization must be written as a product using exponential notation to receive full credit.
   a) 44 b) 56

2. Find the LCD of 44 and 56. Prime factorization must be used for full credit.

3. Add the following using fractions. Make sure that your final answer is completely simplified, including being changed to a mixed number if necessary.
   $^{9}/_{44} + {}^{1}/_{56}$

4. Find the answers to the following fraction problems, **using fractions**, and then give the answers **<u>as a mixed numbers where improper</u>**. Add/Subtract shouldn't reduce!

a) $^{5}/_{7} \div 5\,{}^{1}/_{4}$ b) $^{3}/_{5} \bullet 5\,{}^{2}/_{5}$ c) $7\,{}^{1}/_{12} + 9\,{}^{1}/_{3}$

4. Con'd

d) $125 - {}^{8}/_{15}$

f) $859\ {}^{13}/_{739} - 319\ {}^{23}/_{739}$

g) $3895\ {}^{256}/_{277} + 659\ {}^{29}/_{277}$

5. Give the answer for each of the following:

a) $0 \div 32$ b) $16 \bullet 0$ c) $113 \div 0$

6. Indicate which set of numbers each of the following come from. List all sets to which the number belongs.

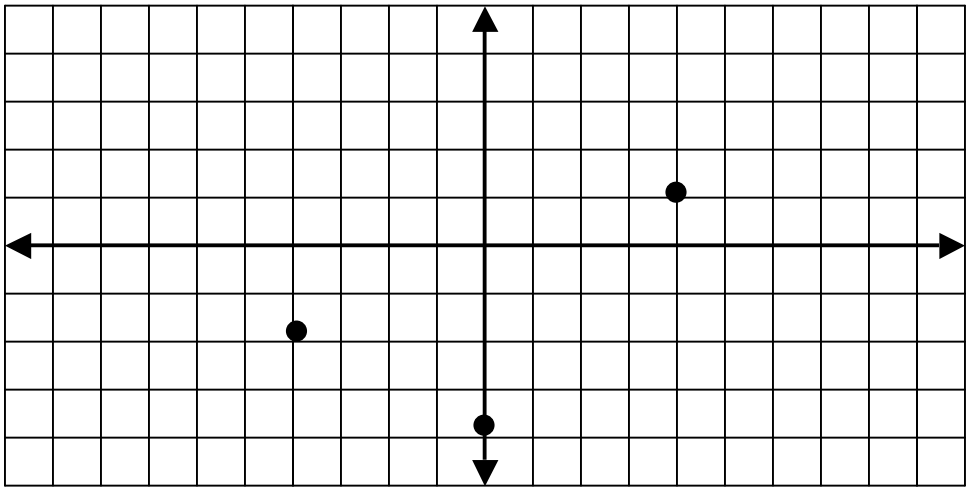
a) $\sqrt{11}$ b) $-{}^{1}/_{\sqrt{36}}$ c) 3.14 d) $-\sqrt{9}$

7. Describe the **integers** greater than 13 using set builder notation.

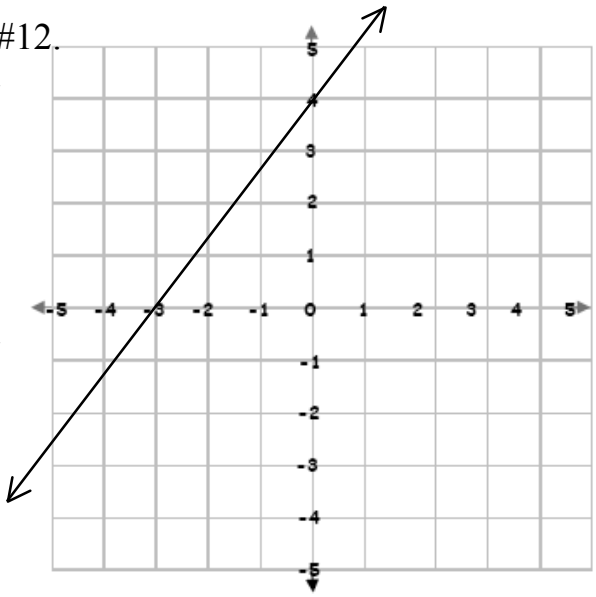
8. Consider the set $\{-0.5, 13, 0, -\sqrt{13}, -6, \sqrt{5}, {}^{1}/_{2}\}$ and choose the set that represents Using a roster, give the members of this set that are irrational.

9. consider the following set $\{-27, -1.2, -{}^{2}/_{3}, 0, {}^{1}/_{2}, 1.9, 3, 1000.2, 1019009\}$ write the subset of the **counting/natural numbers** using roster form.

10. Label the Rectangular Coordinate System with the following elements:
   a) origin (use the correct ordered pair)
   b) four quadrants
   c) the x & y axes
   d) up to positive **and** negative 5 (by ones) on **both** axes (assume each line is 1 unit)
   e) the following ordered pairs (label w/ ordered pair): (4,-5) ; (-2, 0) ; (-1, 4)
   f) the three points shown on the axes with the correct ordered pairs



Use the graph shown to the right for #11 & #12.



11. Put a point on the line at the x-intercept and label it with the correct ordered pair.
   Give the ordered pair here.

12. Put a point on the line at the y-intercept and label it with the correct ordered pair.
   Give the ordered pair here.

13. Draw a number line, and correctly place (graph) $1\frac{1}{5}$ and -0.7
When placing a decimal or fraction the number line must be broken into appropriate increments **between 2 whole #'s** to accurately show the decimal or fraction

14. Use <, > or = to compare the following $\frac{5}{4}$ _____ -0.7

15. Let T be the time it takes to cook a chicken if the temperature in the oven is D degrees Fahrenheit.

Name the **independent** variable: _____

16. Solve the following algebraic equations. Show work.

a) $2x = 92$ b) $x + 19 = 72$

17. Using order of operations simplify the following problem: $2 + 9 \div 3 \cdot 2$

18. Add/Subtract/Multiply/Divide the following. All problems **must use decimals** and must show decimal placement and movement and/or borrowing. Do not round and do not give remainders. For repeating, non-terminating decimals use a bar to show repeat.

a) $0.25 \div 2$ b) $\frac{25}{3}$ c) $1.5\overline{)5.08}$

d) 0.009×1.2 e) $20.1 + 1054.097$ f) $27.1 - 0.917$

19. Divide and round to the nearest tenth (one decimal). $27\overline{)1259}$

20. John and Susan collected walnuts over three days. On the first day, they collect 5.5 pounds of walnuts, on the second day they collected 9.6 pounds of walnuts and on the third day they collected 7.7 pounds. What was the average amount collected per day?