Practice Celebration for Measurement

1. Describe your teachers height in a qualitative measurement _____

2. Describe your teachers height in a quantitative measurement _____

3. Quantitative measures have both a _____ and a _____.

4. You throw three darts, all which land in the target slice marked with a "3". Of course you were aiming for the "20" to score more points. You were:
   A. precise only B. accurate only
   C. precise and accurate D. neither precise or accurate

5. $6.02 \times 10^{23}$ is the chemistry quantity of "a mole" of particles. It's a huge number too. The 6.02 "part" of this scientific notation expression is called the _____.

6. Express these numbers in scientific notation:

   A. 100,000 _____

   B. 0.523 _____

   C. 1,000,000,000,000,000 _____

   D. 0.000000000000000000000012 _____

7. Divide these: $6.0 \times 10^{10} / 3.0 \times 10^{8} =$ _____

   $3.9 \times 10^{4} / 1.3 \times 10^{2} =$ _____

8. Add: $7.50 \times 10^{3} + 1.50 \times 10^{3} =$ _____

9. Multiply: $(2.0 \times 10^{4})(2.0 \times 10^{2}) =$ _____

   $(5.0 \times 10^{5})(2.0 \times 10^{3}) =$ _____

10. The classroom temperature is hot, 26.0ºC. You measured it to be just 24.0ºC. What is your Error and your %Error? Show formulas and work.

11. How many significant figures in each?
    A. 155 _____ B. 150 _____ C. 100 _____ D. 100. _____

    E. 0.0001 _____ F. 1.0002 _____ G. 4.321 _____ H. $5.5 \times 10^{5}$ _____

12. Round to the number of significant figures indicated in the parenthesis

A. 414.756 (3 sf) _____ B. 0.000175 (2 sf) _____ C. 8793 (3 sf) _____

13. I don't ever give a #13

14. A bar of metal has a mass of 534.2 grams and a volume of 60.0 $cm^3$ . What is it? _____

15. Which is correct? The density of ice is less than the density of water. OR,

The density of ice is greater than the density of water. circle one

16. Using ONLY dimensional analysis, convert 2 miles into cm.

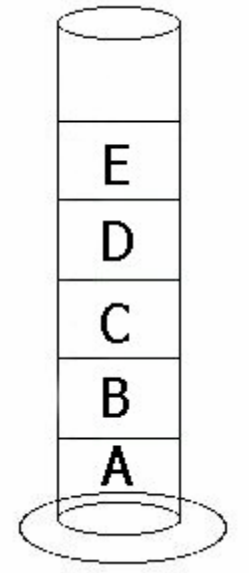
17. Then convert 35 tons into grams

18. Temperature conversions... 29ºC = _____ K 125ºC = _____ K

250K = _____ ºC 350K = _____ ºC 0ºC = _____ ºF

19. If this wacky situation is true: 1 snew = 2 eeks, and if 1 eek = 17 crids, and if 3 crids = 4 bleezes, and finally, if 3 bleezes = 15 alks, how many alks are in one snew? (dimensional analysis only)

20. The diagram at right shows a graduated cylinder with 5 liquids in layers. They are marked ABCDE. In the small data table are four densities for these four liquids. Place the correct letter, ABCD or E in the spaces next to the densities that correlate with the liquids.




| density | Which liquid is it? |
|---|---|
| 13.456 $g/cm^3$ | |
| 3.122 $g/cm^3$ | |
| 1.06 $g/cm^3$ | |
| 0.91 $g/cm^3$ | |
| 0.765 $g/cm^3$ | |