Name _____ date _____ period _____

Math Skills Test **FORM A**

Multiple Choice

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1. An example of an SI unit is a
   a. Kilogram
   b. Pound
   c. Feet
   d. Gallons

2. Measurements are always uncertain because
   a. Instruments aren't precise
   b. Measurement involves some estimation.
   c. No one really know how to measure.
   d. Both a and b

3. Zeros are always considered significant digits when they
   a. Are at the end of a number that has a decimal.
   b. Occur between two non zero numbers
   c. Are before the decimal point
   d. Both a and b

4. A unit of measurement for density could be
   a. g/s.
   b. g/^{o} C
   c. g/cm^{3}
   d. g/Kg.

5. The technique of dimensional analysis is used to
   a. Analyze which dimension your life is in
   b. Evaluate TV shows like the Twilight Zone
   c. Convert units
   d. Analyze different viewpoints.

6. A conversion factor is
   a. a way to measure things
   b. someone who changes money from one country's currency to another.
   c. a fraction that equals one.
   d. One of Max Factor's relatives.

Give the value of the following metric prefixes

7. milli _____ 8. kilo _____ 9. centi _____

How many significant digits are in each of the following measurements ?

1. 0.000 000 015 _____ 11. 230 000 000 _____

12. 6502 _____ 13. 174.00 _____

Put the numbers **into** scientific notation

14. 0.000 000 015 _____ 15. 230 000 000 _____

16. 6502 _____ 17. 174.00 _____

Expand the numbers, or take OUT of scientific notation. Give the answer

18. 1.2345×10^{4} _____ 19. 1.2345×10^{-5} _____

Perform the calculations and round your answer to the proper number of significant digits or decimal places. Remember to write the units and SHOW YOUR WORK!

20. 2.0 cm x 2.00 cm x 5 cm

21. $\frac{88.0\ g}{4.0\ mL}$

22. 12.6 m + 20.02 m + 14.2 m

23. 575 g – 22.5 g

Convert 35 kg into each of the following units, use any method.

24. 35 kg = _____ Hg

25. 35 kg = _____ mg

Convert the following using Dimensional Analysis, SHOW YOUR WORK!

Helpful information

1 in = 2.54 cm 12 in = 1 ft 100 cm = 1 m
100 ml = 1 L 1 cup = 8 fl. oz. 1 cup = 250 m

26. How many feet are in a 5 km race?

27. 32 fl. oz. = _____ ml.

28. Find the perimeter of room if one wall is 10.00 $\pm$ 0.02m and the other wall measures 5.00 $\pm$ 0.02 m. Give the uncertainty (answer and the $\pm$ error term). _____