

Date _____ Period _____ Name _____
Dimensional Analysis Quiz (60 pts)

Convert the following measures. Show all of your work “in a fencepost” for credit and put a box around your final answer. Don't forget to show the units and to record answers with the proper number of significant figures.

A. (6 points each)

a. 60 eggs = ___ dozen

b. 1.56×10^{18} nanoseconds = ___ years

c. 7650 mg = ___ pg

d. 28 L = ___ cm^3

e. 278 kg = ___ Gg

B. Word Problems

- a. Susie wants to run in a 10K race. She knows that there are 5,280 feet in one mile and 2.54 cm in 1 inch. How many miles are there in 10.0 Km (7 pts)?

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- b. Katie measures her height to be 134.5cm. What is her height when converted to Mm (7 pts)?
- c. Curt measures the volume of a lead cube to be 1200.00cm^3 . What is the volume of the cube in cL (centiliters)? (7 pts)
- d. Bob reads that the national debt is \$14, 715, 216, 222, 875.65. He knows that the distance from the moon to the earth is 238,857 miles. He wants to know how many stacked \$1 dollar bills would reach from the earth to the moon (assuming such a thing were possible!). Each dollar bill has a thickness of 0.0047 inches. Knowing that there are 2.54 cm in an inch and 5280 feet in a mile, how many stacked \$1 dollar bills would it take to get to the moon? How does this compare to the national debt? (7 pts)

Extra Credit (+2)

Bob wants to know how many geebies are in 189,000 whozits. There are 15 watchas in 1 bleeper , 12 bleepers in 1 goober and 4 goobers per 2 geebies. 1 watcha has 3 whozits. Report your answer to the correct number of sig figs!