Name _____ Date _____ Class _____



## Work with the System!

**1.** Write True or False next to each statement.

**a.** 12 hg = 1.2 kg _____ **b.** 54 cm = 5.4 mm _____

**c.** 0.5 dL = 0.005 cL _____ **d.** 4.5 g = 0.45 dag _____

**e.** 111 cm = 1.11 m _____ **f.** 7 cL = 70,000 kL _____

**2.** Fill in the missing numbers and units in the equations below.

**a.** 25 mm = _____ cm **b.** 27 kg = 270,000 _____

**c.** 50 cm = 0.005 _____ **d.** 1.2 dL = _____ L

**e.** 0.9 L= _____ mL **f.** 41 hm = 4,100,000 _____

**3.** 1 m = _____ dm = _____ cm = _____ mm

**4.** 5 kg = _____ hg = _____ dg = _____ cg

**5.** Special balances can weigh to the 0.00000001 g. How many kilograms is this?

_____

**6.** A chemistry experiment calls for 5 g of baking soda. Your measuring spoon holds 5000 mg of powder. How many scoops will you need for the experiment?

_____

## Challenge Yourself!

Some SI prefixes are almost never used because they are so small or large. A micrometer (μm) is $10^{-6}$ m, while a nanometer is $10^{-9}$ m. A gigameter is $10^{9}$ m.

**7. a.** How many nanometers are in 1 gigameter?

_____

**b.** How many gigameters are in 1,000,000,000,000 micrometers?

_____

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