Name _____

Date _____ Period _____

Metric Units and Prefixes

You wouldn't measure the thickness of an eyelash with a meter stick. It's just too big to be convenient. For that matter, a meter is too large to be a convenient unit for measuring the thickness of an eyelash. The metric system uses a system of prefixes to show fractions and multiples of the basic units. The basic units are meters (m) to measure distance, grams (g) to measure mass, and liters (L) to measure volume. Some of the important prefixes are shown below:

Kilo (k)	=	1,000	=	10^3
Deci (d)	=	0.1	=	10^{-1}
Centi (c)	=	0.01	=	10^{-2}
Milli (m)	=	0.001	=	10^{-3}
micro (μ)	=	0.000001	=	10^{-6}
nano (n)	=	0.000000001	=	10^{-9}
pico (p)	=	0.000000000001	=	10^{-12}

It's going to be tough to measure this little cube with this big ruler.

For each group of values listed below, write the items in order from largest to smallest. Then state whether the values represent distance, mass, or volume.

Values	Order	Type (distance, mass, or volume)
1. 10 km, 10 pm, 10μm, 10 dm	_____	_____
2. 0.5 μL, 0.5 nL, 0.5 cL	_____	_____
3. 1.2 mm, 1.2 km, 1.2 cm	_____	_____
4. 3.5 cg, 3.5 g, 3.5 ng, 3.5 μg	_____	_____
5. 0.25 μL, 0.25 dL, 0.25 cL	_____	_____
6. 7.3 g, 7.3 pg, 7.3 kg, 7.3 mg	_____	_____
7. 4 pL, 4μL, 4kL, 4mL, 4 dL	_____	_____
8. 8μm, 8 pm, 8 m, 8 km, 8 nm	_____	_____
9. 0.1 kL, 0.1 L, 0.1 μL, 0.1 pL	_____	_____
10. 5.6 dg, 5.6 kg, 5.6 pg, 5.6 μg	_____	_____