

HOMEWORK: Metrics, Scientific Notation, and Dimensional Analysis

Complete problems 1-11 using either the metric staircase or the following conversions. Show all your work in your science notebook! Tape this page in your notebook, also.

$\frac{1 \text{ inch}}{2.54 \text{ cm}}$	$\frac{1 \text{ foot}}{12 \text{ in.}}$	$\frac{1 \text{ smurf}}{10 \text{ centimeters}}$	$\frac{1 \text{ year}}{365 \text{ days}}$	$\frac{1 \text{ day}}{24 \text{ hrs.}}$	$\frac{1 \text{ hour}}{60 \text{ min.}}$	$\frac{1 \text{ minute}}{60 \text{ sec.}}$	$\frac{1 \text{ week}}{7 \text{ days}}$
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- 1) Convert 50 milliliters to liters.
- 2) Convert 3.6 kilometers to decimeters.
- 3) Convert 2 meters to inches.
- 4) Convert 350 inches to meters.
- 5) Convert 12 feet into kilometers.
- 6) How many hours are in 4.5 weeks?
- 7) How many days are in 6000 minutes?
- 8) How many seconds are in a year?
- 9) How many years in 1,000,000 seconds?
- 10) How many smurfs in 20 feet?

You're a dimensional analysis wonder if you can... 11) Convert 55 miles/hour to meters/second.

12) Express the following numbers in scientific notation:

- a) 0.0068 g b) 24,800 km c) 9,800,000,000,000 kg d) 0.000000537 m e) 0.041 km