Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Metric Conversions**

The **Metric System** of measurement is based on multiples of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The **3 base units** are : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The **6 prefixes** are: \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_.



To use the **Stair-Step method**, you will move the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the direction you have to move on the stairs.

**Write the equivalent measurements:**

1. 5 dm = \_\_\_\_\_\_\_\_\_\_\_ m
2. 38.2 dkg = \_\_\_\_\_\_\_\_\_\_ cg
3. 2500 dL = \_\_\_\_\_\_\_\_\_ kL
4. 2 mL = \_\_\_\_\_\_\_\_\_\_\_ L
5. 75 mL = \_\_\_\_\_\_\_\_\_\_ kL
6. 6.5 m = \_\_\_\_\_\_\_\_\_ cm
7. 2007 mg = \_\_\_\_\_\_\_\_\_ g
8. 480 cm = \_\_\_\_\_\_\_\_ dkm

**Comparing Quantities**

**Compare the measurements using <, >, or =. \*\*SHOW YOUR WORK\*\***

1. 63 cm \_\_\_\_\_\_\_ 6 m
2. 43 mg \_\_\_\_\_\_\_ 5 g
3. 5 g \_\_\_\_\_\_\_ 508 mg
4. 3.6 m \_\_\_\_\_\_\_ 36 cm
5. 1500 mL \_\_\_\_\_\_\_ 1.5 L
6. 7 g \_\_\_\_\_\_ 698 mg
7. 536 cm \_\_\_\_\_\_ 53.6 dm
8. 1.1 hL \_\_\_\_\_\_ 110 dkL

**Answer the following questions using metric conversions.**

1. Wanda needs to move 110 kg of rocks. How many hectograms is that?
2. Dr. O is working on her garden. She needs 1 kg of potting soil for her plants. She has 750 g. Does she have enough soil? Justify your answer.
3. One cereal bar has a mass of 37 g. What is the mass of 6 cereal bars? Is that more or less than 1 kg? Explain your answer.
4. Will a tablecloth that is 155 cm long cover a table that is 1.6 m long? Explain.
5. Alex rode 2 kilometers on his bike. His sister rode 3000 meters on her bike. Who rode the farthest and how much farther did they ride? (Answer in meters)
6. A rectangle has a length of 20 cm and a width of 1 meter. What is the perimeter of the rectangle? (Hint: Perimeter means you add up all the sides. Draw a picture if needed)
7. 42 cm
8. 120 cm
9. 140 cm
10. 240 cm
11. Of the following, which of the following is the largest quantity?
	1. 1.5 km
	2. 150 cm
	3. 15000 mm
	4. 150 hm
12. Of the following, which of the following is the smallest quantity?
	1. 3 kg
	2. 54 hg
	3. 12 dkg
	4. 178 g