# Diagnostic Test
# Unit 8 Metric Measurement

**Purpose**: to help the student and instructor determine what, if any, sections of this unit the student needs to study.

1.  Use a ruler or meter stick and draw lines of the following length.

    a)  13 centimeters

    b)  109 millimeters

    c)  8 millimeters

2.  (This problem is not done on paper.)  With the instructor watching you, measure out a length of 2 meters.

3.  Using a meter stick, draw a line that is 57.6 centimeters long.

4.  Using a meter stick, draw a line that is 105.2 centimeters long.

5.  70.6 centimeters = _____ millimeters

6.  9 millimeters = _____ centimeters

7.  50 centimeters = _____ millimeters

8.  100 millimeters = _____ centimeters

9.  61 meters = _____ kilometers

10. 2,496 centimeters = _____ millimeters

11. 8 kilometers = _____ meters

12. 16.4 centimeters = _____ meters

13. 4.003 meters = _____ centimeters

14. Without using a ruler or meter stick, choose which measurement makes the most sense.

   a) Length of soccer field:

      9 meters            90 meters            900 meters

   b) Height of a paper coffee cup from Starbucks:

      1.4 centimeters    14 centimeters       140 centimeters

15. 0.06 kilograms = _____ grams

16. 30.9 grams = _____ kilograms

17. 107 grams = _____ milligrams

18. 37 milligrams = _____ grams

19. In each example, choose the measurement that makes the most sense.

   a) Weight of a paper cup filled with coffee:

      400 milligrams     400 grams           400 kilograms

   b) Weight of a piece of paper:

      5 milligrams       5 grams             5 kilograms

   c) Weight of a high school student:

      5 kilograms        50 kilograms        155 kilograms

   d) Weight of a textbook:

      1 kilogram         10 kilograms        100 grams

20. What is the definition of "volume"?

21. 12.06 liters = _____ milliliters

22. 24 milliliters = _____ liters

23. 1000 liters = _____ milliliters

24. 0.073 liters = _____ milliliters

25. 634 milliliters = _____ liters

26. In each example, choose the measurement that makes the most sense.

    a) Volume of the largest size coffee at Starbucks:

       59 milliliters      590 milliliters      5.9 liters

    b) Volume of liquid in a spoon you would eat with:

       15 milliliters      150 milliliters      1 liter

    c) Volume of a can of soda:

       35 milliliters      3.5 liters      355 milliliters

    d) Volume of a plastic trash can in a school classroom:

       490 milliliters      49 liters      2 liters