Metric Mania

LENGTH:
1. What is the basic unit for length? ____________

2. Circle the best unit for measuring each distance:
   a. Thickness of an eyelash: ________ cm or ________ mm
   b. Length of a pencil: ________ m or ________ km

3. Use a meter stick or metric ruler to find each measurement.
   a. Width of this page ____________ mm or ____________ cm
   b. Length of an unsharpened pencil ____________ cm

4. Convert the following measurements:
   a. 34 mm = 3.4 cm
   b. 3 km = 3000 m
   c. 234 cm = 2.34 m
   d. 35 m = 3500 mm

MASS:
5. What is the basic unit for mass? ____________

6. Circle the best unit for measuring each mass:
   a. Amount of spices in a batch of cookies: ________ mg or ________ g or ________ kg
   b. Your mass: ________ g or ________ kg
   c. Mass of 10 pennies: ________ mg or ________ g or ________ kg

7. Use a triple-beam balance to find each measurement.
   a. Mass of an ink pen ____________ g
   b. Mass of a can of soda ____________ g

8. Convert the following measurements:
   a. 16 mg = 0.016 g
   b. 4.7 kg = 4700 g
   c. 12,345 g = 12.345 kg
   d. 2 g = 2000 mg

TEMPERATURE:
15. What is the basic unit for temperature? ____________

16. What are the freezing and boiling points for water on this scale? ____________ °C

17. Circle the best choice:
   a. Temperature on a hot summer’s day: ____________ °C
   b. Room temperature: ____________ °C

18. Convert the following measurements.
   a. 90°F = ____________ °C
   b. 45°F = ____________ °C

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VOLUME:
19. What is the basic unit for volume? **liter**

20. Circle the best unit for measuring each volume:
   a. Amount of soda in 1 can: **ml**
   b. Water in a bathtub: **mL or L**

21. Determine the volume for each object:
   a. Use L x W x H to find the volume of a chalkboard eraser **_________ cm³**
   b. Use water displacement to find the volume of four marbles
      **_________ ml or _________ cm³**

22. Convert the following measurements:
   a. \(160\text{cm}³ = \frac{160}{1000}\text{L} = 0.160\text{ L}\) larger  
   b. \(23\text{ kL} = 23000\text{ L}\) smaller 
   c. \(120\text{ mL} = \frac{120}{1000}\text{ cm}³ = 0.120\text{ cm}³\) 
      \(1\text{ mL} = 1\text{ cm}³\)

TIME:
23. What is the basic unit for measuring time? **second**

24. How many seconds are in:
   a. 1 minute? **60 s**
   b. 6 hours? **\(\frac{6 \times 60 \times 60}{1} = 21,600\) s**
   c. 2 days? **\(\frac{2 \times 24 \times 60 \times 60}{1} = 172,800\) s**

DENSITY:
28. Would the objects with the following densities float, sink, or remain suspended in tap water?  
   a. 0.85 g/mL **float**
   b. 1.0 g/mL **suspended**
   c. 1.4 g/mL **sink**
   d. 0.92 g/mL **float**

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