Measurement

MEASUREMENT 1

1. Measure the length of the bar in mm and cm.   cm _____

                                                        mm_____

    ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬

2. Determine the following:

    a. What is the freezing temperature of water in celsius?   _____

    b. Which of the following temperatures represents a comfortable room temperature?

        5°C, 10°, 20°C or 30°C

                                                                    _____

3. Make the following conversions:

    a. 109 mm = _____ cm   b. 0.0038 t = _____ kg

    c. 4.3 ha = _____ m²   d. 0.26 L = _____ cm³

    e. 48 h = _____ min   f. 6 840 cm² = _____ m²

    g. 0.000 52 km = _____ m   h. 93 000 000 g = _____ kg

    i. 2.84 m = _____ mm   j. 0.00615 km² = _____ m²

    k. 3 h 25 min = _____ min

4.   Find the area of the rectangle in cm^2.   _____

5.   A rectangular lot measures 150 m × 400 m.

        a. Find the area in m^2 _____

        b. How many hectares is this lot?   _____

6.   Make the following conversions:

        a. 3.5 L of water = _____ kg of water

        b. 18 g of water = _____ mL of water

        c. 0.92 t of water = _____ L of water

        d. 0.06 L of water = _____ g of water

ANSWER KEY

1. 10.5 cm, 105 mm

2. a. 0°C   b. 20°C

3. a. 10.9 cm   b. 3.8 kg   c. 43 000 m^2 d. 260 cm^3 e. 2880 min

    f. 0.684 m^2 g. 0.52 m   h. 93 000 kg   i. 2840 mm   j. 6150 m^2

    k. 205 min

4. 12.8 or 13 cm^2 (approximately)

5. a. 60 000 m^2 b. 6 ha

6. a. 3.5 kg   b. 18 ml   c. 920 L   d. 60 g

Source: Government of BC used with permission.

MEASUREMENT 2

1. A wall measures 9.6 m × 3.2 m.

   a. Find the area. _____

   b. If 1 litre of paint covers 12 m² how many litres of

      paint is needed to double-coat this wall? _____

2. A rectangular tank measures 60 cm × 80 cm × 50 cm.

   a. Find the volume. _____

   b. How much water will it hold in litres? _____

3. A freezer compartment measures 1.2 m × 0.5 m × 0.4 m.

   a. Find the volume. _____

   b. How many one-litre bricks of ice cream will it hold? _____

4. Joan is 5 feet, 8 inches tall. How tall is she in cm and m? cm_____

   m _____

5.   A salmon's mass is 2.8 kg. The cookbook says to cook it 20 minutes per pound. How long
     should the salmon be cooked?   _____ hrs _____ min

6.   The 1500 metre race is sometimes called the "metric mile". Which race is longer, the 1500
     metre race or the mile and by how many metres?   _____ m

7.   An old road map suggests that the distance from Salmon Arm to Vancouver is 310 miles. How
     long would a return trip from Salmon Arm to Vancouver be in km? _____

8.   The conversion for km per litre to miles per gallon is:

     1 km/L = 2.82 mi/gal

     Peter's car gets 12 km/L. How many miles per gallon is this?   _____

ANSWER KEY

1. a. 30.7 m^2 5.12 ≈ 6 L

2. a. 240 000 cm^2 b. 240 L

3. a. 0.24 m^3 or 240 000 cm^3 b. 240

4. 172.7 cm   1.7 m

5. 2 hours 3.2 min

6. the mile race by 110 m

7. 998.2 km

8. 33.84 mi/gal

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MEASUREMENT 3

1. Measure the length of the bar in mm and cm.

    cm _____

    mm_____

2. Determine the following:

    a. What is the boiling temperature of water in celsius?   _____

    b. Which of the following temperatures represents a cool day in British Columbia?

    0°C, 10°, 20°C or 30°C

    _____

3. Make the following conversions:

    a. 605 mm = _____ cm

    b. 0.0025 t = _____kg

    c. 0.43 ha = _____ m^2

    d. 8.2 L = _____ cm^3

    e. 24 h = _____ min

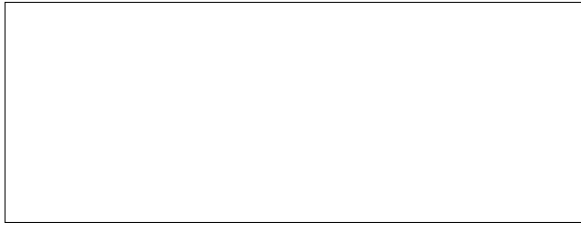   f. 9 840 cm^2 = _____ m^2

    g. 0.000 35 km = _____ m

    h. 63 400 g = _____kg

    i. 0.156 m = _____ mm

    j. 0.0028 km^2 = _____ m^2

    k. 5 min 20 s = _____ s

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4.   Find the area of the rectangle in cm^2.   _____

5.   A rectangular lot measures 250 m × 300 m.

a. Find the area in m^2.   _____

b. How many hectares is this lot?   _____

6.   Make the following conversions:

a. 5.9 L of water = _____ kg of water

b. 36 g of water = _____ mL of water

c. 0.52 t of water = _____ L of water

d. 0.08 L of water = _____ g of water

ANSWER KEY

1. 11.7 cm   117 mm

2. a. 100°C   b. 10°C

3. a. 60.5 cm   b. 2.5 kg   c. 4300 m^2 d. 8200 cm^3 e. 1440 min

   f. 0.984 m^2 g. 0.35 m   h. 63.4 kg   i. 156 mm   j. 2800 m^2

   k. 320 s

4. 22.6 cm^2 (approximately)

5. a. 75 000 m^2 b. 7.5 ha

6. a. 5.9 kg   b. 36 ml   c. 520 L   d. 80 g

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MEASUREMENT 4

1.   A wall measures 11.5 m × 2.8 m.

   a. Find the area.   _____

   b. If 1 litre of paint covers 12 m^2 how many litres of

       paint are needed to double-coat this wall?   _____

2.   A rectangular tank measures 80 cm × 120 cm × 50 cm.

   a. Find the volume.   _____

   b. How much water will it hold in litres?   _____

3.   A freezer compartment measures 1.1 m × 0.3 m × 0.6 m. (2 marks)

   a. Find the volume.   _____

   b. How many one-litre bricks of ice cream will it hold?   _____

4.   An old atlas states that Canada is about 3.85 million square miles in area. What is the area of
      Canada in km^2?

                                                                  _____

5. A roast has a mass of 1.8 kg. The cookbook says to cook it 30 minutes per pound. How long should the roast be cooked?   _____ hrs _____ min

6. The 6-mile race is very similar to the metric 10 000 metre race. Which race is longer and by how many metres?   _____ m

7. On the basketball program, Olga's height is listed as being 190.5 cm. How tall is she in feet and inches?   _____

8. The conversion for km per litre to miles per gallon is:

    1 km/L = 2.82 mi/gal

    If Therese's truck only gets 4 km/L, how many miles per gallon is this?   _____

ANSWER KEY

1. a. 32.2 m²   b. 5.4 L or 6 L

2. a. 480 000 cm³   b. 480 L

3. a. 0.198 m³ ≈ 198 000 cm³   b. 198

4. 9 979 585 km² or 10 million km²

5. 1 hour 58.8 min

6. The 10 000 m race by 340 m.

7. 6 feet 3 inches

8. 11.28 mi/gal

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