

**# homework check: Lesson 1 - 2****# note: Converting from Metric to Imperial Measure**

In order to convert from metric to imperial measure or vice versa, we must use our conversion charts/tables from yesterday. Some of the most common conversions from either metric to imperial or imperial to metric are temperature and gas use. For example,

- a) If the weather network predicts a high of 98 degrees Fahrenheit (F), what can we expect in Celcius (C)?

*From the temperature conversion chart:*

Subtract 32, then multiply by 5/9

$$98 - 32 =$$

$$= 66$$

$$66 \left( \frac{5}{9} \right) =$$

$$= 35.7^{\circ}\text{C}$$

- b) If a new vehicle claims to use only 4L/100km, what is the gas usage in the more common miles per gallon? Is this rate believable?

*From the length conversion chart:*

$$1 \text{ km} = 0.6214 \text{ miles (mi)}$$

$$100 \times 0.6214 =$$

$$= 62.14 \text{ mi}$$

*From the volume/capacity conversion chart:*

$$1 \text{ gal} = 4.5461 \text{ L}$$

$$4 \div 4.5461 =$$

$$= 0.879875057$$

*To calculate miles/gallon, we divide the two quantities:*

$$\frac{62.14}{0.879875057} =$$

$$= 71 \text{ mpg}$$

This rate is only believable in a hybrid car.

**# homework assignment: Lesson 1 - 3**

**Lesson 1 – 3: Metric to Imperial**

**1. Convert each measure to the indicated units.**

- a) 10 mi. to km                      b) 3 m to yds.                      c) 6 gal. to L                      d) 156 lb. to kg
- e) 2 tbsp. to mL                      f) 60 cm to inches                      g) 4 L to qt.                      h) 600 g to lbs.

**2. The weather forecast calls for 12 cm of snow. How many inches can we expect?**

**3. You have a 1.5 gal. jug. How many litres will it hold?**

**4. Joe is travelling in the United States. The road sign indicated he is 228 mi. from his destination. How many km away is Joe?**

**5. Which of the following trees can be planted by city hydro poles if the wires must have clearance of at least 5 m.**

Variety of tree	Max height (feet)	Conversion to metres	Can this tree be planted?
Amur maple	20		
Blackhaw viburnum	15		
Blue ash	40		
Paperbark maple	30		
Serviceberry	25		

- 6. Gas prices are \$3.20/gal. What is the price per litre? Show your work.**
  
  
  
  
  
  
  
  
  
  
- 7. Marcel can buy cheese at the Farmer's market for \$3.06/lb. At the grocery store, cheese sells for \$6.59/kg. Which is the better buy? Show your work.**
  
  
  
  
  
  
  
  
  
  
- 8. Max's trainer recommends that her drink 2 qt. of water a day. Max's water comes in 500 mL bottles. How many bottles of water should he drink? Show your work.**
  
  
  
  
  
  
  
  
  
  
- 9. Salmonella bacteria are destroyed at cooking temperatures above 150 degrees Fahrenheit. What is this temperature in degrees Celsius?**
  
  
  
  
  
  
  
  
  
  
- 10. A recipe calls for 1.89 L of pineapple juice, 2 cans of 355 mL frozen OJ, 2 – 2L bottles of ginger ale, and 600 g of strawberries. If Maria puts all the ingredients in a mixing pail, how many litres of liquid does she have?**