

Math 10

1.1-1.3 Review Assignment

1. Which imperial unit would you use to measure each of the following?

- a) the length of a pen
- b) the height of a doorway
- c) the length of a classroom
- d) the distance from Vancouver to Seattle

inches  
feet  
feet / yards  
miles

2. Which SI unit would you use to measure each of the following?

- a) the width of a diamond earring
- b) the length of a pencil
- c) the perimeter of a classroom
- d) the distance from Burnaby to Whistler

mm  
cm  
m  
km

3. Complete each of the following conversions within the imperial system. Show your work using a conversion factor.

a) 6 ft. = 72 in.

$$6 \cancel{\text{ft}} \times \frac{12 \cancel{\text{in}}}{1 \cancel{\text{ft}}}$$

b) 4 ft. 2 in. = 50 in.

$$4 \cancel{\text{ft}} \times \frac{12 \cancel{\text{in}}}{1 \cancel{\text{ft}}} + 2 \text{ in} \\ = 48 + 2 \\ = 50$$

c) 65 in. = 5 ft. 5 in.

$$65 \text{ in} = 5 \frac{5}{12} \text{ ft}$$

d) 18 yd. = 52<sup>54</sup> ft.

$$18 \text{ yd} \times \frac{3 \text{ feet}}{1 \text{ yd}}$$

e) 25 ft. = 8 yd. 1 ft.

$$25 \text{ ft} = 8 \frac{1}{3} \text{ yd}$$

f) 3 mi. = \_\_\_\_\_ yd.

$$3 \text{ mi} \times \frac{1760 \text{ yd}}{1 \text{ mi}} = 5280 \text{ yd.}$$

4. Complete each of the following conversions within the SI system. Show your work using a conversion factor.

a) 35 mm = 3.5 cm

$$35 \cancel{\text{mm}} \times \frac{1 \cancel{\text{cm}}}{10 \cancel{\text{mm}}}$$

b) 15 m = 1500 cm

$$15 \cancel{\text{m}} \times \frac{100 \cancel{\text{cm}}}{1 \cancel{\text{m}}}$$

c) 3.2 km = 32000 cm

$$3.2 \cancel{\text{km}} \times \frac{1000 \cancel{\text{m}}}{1 \cancel{\text{km}}} \times \frac{100 \cancel{\text{cm}}}{1 \cancel{\text{m}}}$$

d) 900 mm = 0.0009 km

$$900 \cancel{\text{mm}} \times \frac{1 \cancel{\text{m}}}{1000 \cancel{\text{mm}}} \times \frac{1 \cancel{\text{km}}}{1000 \cancel{\text{m}}}$$

5. Complete each of the following conversions between the Imperial and SI systems. Show your work using a conversion factor. Round to 1 decimal place where appropriate.

a) 5 in. = 12.7 cm

$$5 \text{ in.} \times \frac{2.54 \text{ cm}}{1 \text{ in.}}$$

b) 15 cm = 5.9 in.

$$15 \text{ cm} \times \frac{1 \text{ in.}}{2.54 \text{ cm}}$$

c) 18 yd. = 1.7 m

$$18 \text{ yd} \times \frac{3 \text{ ft}}{1 \text{ yd}} \times \frac{0.3 \text{ m}}{1 \text{ ft}}$$

d) 40 m = 43.7 yd.

$$40 \text{ m} \times \frac{1 \text{ ft}}{0.3 \text{ m}} \times \frac{1 \text{ yd}}{3 \text{ ft}}$$

e) 3 mi. = 4.8 km

$$3 \text{ mi.} \times \frac{1.6 \text{ km}}{1 \text{ mi.}}$$

f) 5 km = 3.1 mi.

$$5 \text{ km} \times \frac{1 \text{ mi.}}{1.6 \text{ km}}$$

g) 5 mi. = 8,000 m

$$5 \text{ mi.} \times \frac{1.6 \text{ km}}{1 \text{ mi.}} \times \frac{1,000 \text{ m}}{1 \text{ km}}$$

h) 6 km = 20,000 ft.

$$6 \text{ km} \times \frac{1,000 \text{ m}}{1 \text{ km}} \times \frac{1 \text{ foot}}{0.3 \text{ m}}$$

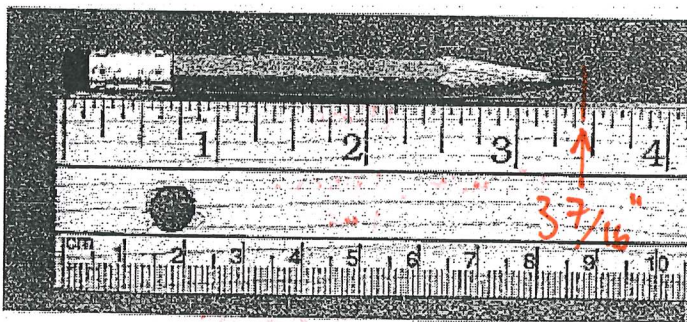
6. Two cities are  $2 \frac{1}{2}$  cm apart on a map. If the scale of the map is 1: 2 000 000, what is the actual distance between the cities to the nearest mile?

$$1: 2,000,000$$

$$2.5 \text{ cm} \times 2,000,000$$

$$= 5,000,000 \text{ cm} \times \frac{1 \text{ in.}}{2.54 \text{ cm}} \times \frac{1 \text{ ft}}{12 \text{ in.}} \times \frac{1 \text{ yd}}{3 \text{ ft}} \times \frac{1 \text{ mi.}}{1760 \text{ yd}} = \underline{31 \text{ miles}}$$

7. Determine the length of the pencil shown below in imperial units.



3 7/16"

3 7/16 inches