

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

### Metric Conversions: One Step

**Directions:** Use the conversion chart to solve each problem. Remember, the larger unit gets a "1" in the conversion factor. The other unit gets the conversion value from the chart.

1)  $3.68 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$

2)  $568 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

3)  $8700 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$

4)  $25 \text{ mg} = \underline{\hspace{2cm}} \text{ g}$

5)  $0.101 \text{ m} = \underline{\hspace{2cm}} \text{ nm}$

6)  $250 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$

7)  $600 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$

8)  $8900 \text{ mm} = \underline{\hspace{2cm}} \text{ m}$

9)  $0.000004 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

10)  $0.250 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$

# Conversion Practice and Scale

1. Write each ratio in lowest terms.

a)  $4:12 = \square : \square$

$$\frac{4 \div 4}{12 \div 4} =$$

b)  $5:15 = \underline{\hspace{2cm}}$

c)  $10:100 = \underline{\hspace{2cm}}$

d)  $10:1000 = \underline{\hspace{2cm}}$

e)  $40:4 = \underline{\hspace{2cm}}$

f)  $20:2 = \underline{\hspace{2cm}}$

2. Write each scale as a ratio in lowest terms.

**Remember:**  
*cm:cm*  
 or  
*mm:mm*  
 or  
*m:m*

a) 1 cm represents 25 cm

1:

b) 1 cm represents 1 m

\_\_\_\_\_

c) 1 cm represents 3 m

\_\_\_\_\_

d) 5 cm represents 5 m

\_\_\_\_\_

e) 1 cm represents 1 km

\_\_\_\_\_

f) 1 cm represents 4 km

\_\_\_\_\_

g) 1 cm represents 1 mm

10:

h) 1 cm represents 2 mm

\_\_\_\_\_

i) 1 cm represents 5 mm

\_\_\_\_\_

**Examples:**

1. 1 cm represents 15 cm

**1:15**

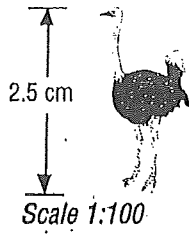
2. 1 cm represents 2 m

**1 m = 100 cm**

**2 m = 200 cm**

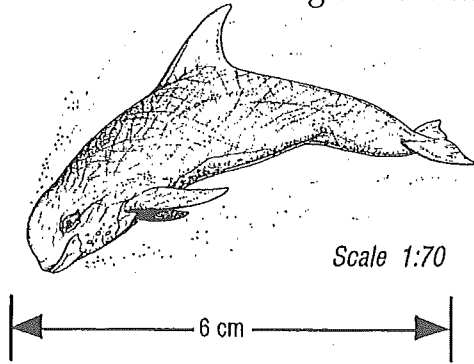
**1:200**

3. Find the actual height of the ostrich, in metres.

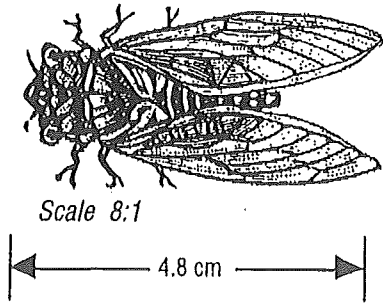


$$\frac{\text{length of drawing}}{\text{actual length (a)}}$$

4. Find the actual length of the whale, in metres.



5. Find the actual length of the housefly, in millimetres.



**6. Determine the Scale and Scale Factor of the quarter**

A= The diameter of an actual Canadian quarter is 23.88 mm.



D = Measure the diameter of the diagram of the quarter using a ruler: \_\_\_\_\_ mm

(a) Determine the scale by setting up a proportion.

$$\text{scale} = \frac{\text{diagram measurement}}{\text{actual measurement}}$$

(b) Calculate the scale factor used to create the diagram of the quarter.

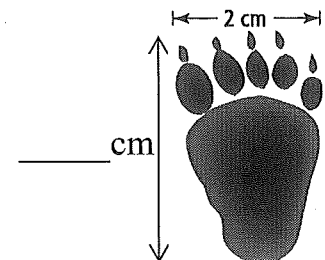
SCALE FACTOR = \_\_\_\_\_

Round to the nearest tenth.

7. The actual footprint of an adult male polar bear measures 40 cm across (width).

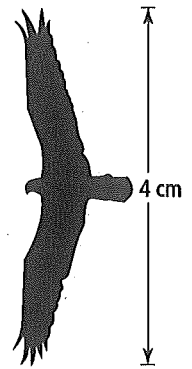
a) What is the scale factor?

b) What is the length of the footprint in the diagram? (use a ruler!)



c) Use the scale factor from part a) to find the actual length of the footprint.

8. An eagle's wingspan is 4 cm long on a drawing. The scale is 1 : 50.  
Find the actual length of the eagle's wingspan.



9. Julie wants to build a scale model of a volcano for the science fair.  
The volcano is actually 2500 m tall. If she uses a scale of 1 : 100, how tall will her volcano be? Will it fit into the classroom?
10. A flying distance of 800 km is 5 cm on a map. What is the scale factor?