

### 3.2 Converting Measurements Assignment

Use the conversion factors on the right...

THE CONVERSION FACTORS BETWEEN SI AND IMPERIAL UNITS	
<i>SI to Imperial</i>	<i>Imperial to SI</i>
1 mm = 0.0394 in	1 in = 25.4 mm
1 cm = 0.3937 in	1 inch = 2.54 cm
1 m = 3.2808 ft	1 ft = 0.3048 m
1 m = 1.0936 yd	1 yd = 0.9144 m
1 km = 0.6214 mi	1 mi = 1.6093 km

1. Suzanne purchased tiles for her patio that are 8" x 4". She measured her patio in metres and wants to convert the tile dimensions to SI units. What are the dimensions of the tiles in centimetres?
2. Tommy is delivering a load of goods (celery) from Vancouver, BC to Seattle, WA. In Seattle, he picks up another load of celery to deliver to Dallas, TX. The odometer in Tommy's beater truck records distance in miles. The odometer recorded 137 mi from Vancouver to Seattle and 2106 mi from Seattle to Dallas. His cheap employer pays him \$0.29/km for the use of his own truck (round trip). How much will Tommy be reimbursed for the use of his truck for the entire trip?



3. Marnie owns a carpet store and sells hallway runners for \$9.52/linear foot.
  - a) How much is this per linear metre?
  - b) Ralph needs 3.9 m of the runner for his hallway. How much will it cost?

4. Ricardo has been hired to lay terracotta tiles on a floor that measures 4.2 m by 3.8 m. The tiles are 9" by 9" and come in boxes of 12.

a) How many boxes must he buy? (He cannot buy a partial box)

b) If the tiles cost \$18.95 per box, how much will the tiles cost in total?

5. Manuel needs to order a supply of hose clamps with a *minimum diameter* of 32 mm. He found an online auto parts company in the U.S. that sells hose clamps with a maximum diameter of  $\frac{7}{8}$  inch. Would the U.S. clamps be the correct size?

1 in = 2.54 cm = \_\_\_\_\_ mm

6. Haylee is a landscape contractor. She calculates the cost of cementing a circular pad for a client's patio project. When all costs are considered, the job will cost \$175.85 per square metre of finished area. If the pad has a radius of 6 feet, how much will she charge for the job? ( Remember: Area of a circle =  $\pi r^2$  )