# **Chapter** Review

1. Express each measurement in the units given.
   a) 12 ft 9 in. = __153__ in.
   b) 22 yd 2 ft = __68__ ft
   c) 3 mi 50 yd = __5330__ yd
   d) $4\frac{3}{4}$ mi = __25 080__ ft
   e) 4 yd 2 ft 3 in. = __171__ in.
   f) 8.5 mi = __14 960__ yd

2. Express each measurement in the units given.
   a) 16.5 m = __1650__ cm
   b) 525 mm = __52.5__ cm
   c) 0.65 km = __65__ dam
   d) 85 dm = __0.085__ hm
   e) 13.5 m = __0.0135__ mm
   f) 62 075 cm = __620.75__ m

3. Use a straightedge to draw a line for each length, without using a ruler. Then measure and record the length.
   a) 4 in.
   $3\frac{5}{8}$ in.
   b) 30 mm
   **35 mm**
   c) $\frac{1}{4}$ ft
   $3\frac{1}{4}$ in.

4. Estimate each measure.
   a) the height of a horse in feet: __about 5 ft__
   b) the diameter of a bike tire in centimetres: __about 70 cm__
   c) the width of a bike tire in millimetres: __about 20 mm__
   d) the height of a street light in metres: __about 8 m__

   width

5. Explain how to determine the midpoint of a linear measure. Suggest two strategies.
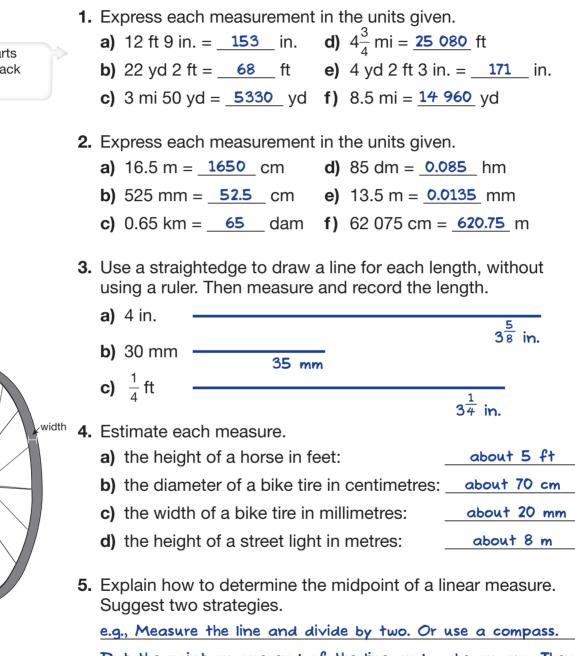
   e.g., Measure the line and divide by two. Or use a compass. Put the point on one end of the line and make an arc. Then put the point on the other end of the line and make another arc. Connect the points where the arcs intersect and that line will go through the midpoint of the line.

**6.** Express each measurement in the units given. Round to one decimal place.

| Imperial to SI |
|---|
| 1 in. ≐ 2.54 cm |
| 1 ft ≐ 0.31 m |
| 1 yd ≐ 0.91 m |
| 1 mi ≐ 1.61 km |

a) 15 in. ≐ __38.1__ cm      d) 8 mi ≐ __12.9__ km

b) 12 ft ≐ __3.7__ m      e) 4 yd 1 ft ≐ __4.0__ m

c) 21 yd ≐ __19.1__ m      f) $20\frac{1}{2}$ mi ≐ __33.0__ km

**7.** Express each measurement in the units given. Round to one decimal place.

| SI to Imperial |
|---|
| 1 mm ≐ 0.039 in. |
| 1 cm ≐ 0.39 in. |
| 1 m ≐ 1.09 yd |
| 1 km ≐ 0.62 mile |

a) 2.5 m ≐ __2.7__ yd      d) 8.5 km ≐ __5.3__ mi

b) 120 mm ≐ __4.7__ in.      e) 13.25 m ≐ __43.3__ ft

c) 84 cm ≐ __32.8__ in.      f) 620 hm ≐ __38.4__ mi

**8.** A jumbo jet is flying at 24 000 ft. A Learjet is flying at 7500 m. Which jet is flying at the higher elevation? Show how you know.

Learjet: 7500 m x 1.09 yd/m ≐ 8175 yd

8 175 yd = 24 525 ft

The Learjet is flying at a higher elevation because

24 525 feet is higher than 24 000 feet.

**9.** How many lengths must you swim in a pool that is 25 yd long to swim 1 km?

1 km = 1000 m

1000 m x 1.09 yd/m ≐ 1090 yd

1090 yd ÷ 25 yd/length = 43.6 lengths

You need to swim almost 44 lengths.

**10.** Carpenters use two-by-fours to frame houses. These are pieces of lumber that are $1\frac{1}{2}$ in. thick and $3\frac{1}{2}$ in. wide. What are the dimensions of a two-by-four in centimetres?

e.g., 1.5 in. x 2.54 cm/in. ≐ 3.81 cm

3.5 in. x 2.54 cm/in. ≐ 8.89 cm

It is about 3.8 cm thick and about

8.9 cm wide.

*Chapter 2  Linear Measurement*