

Lesson 2 Relating SI and Imperial Units

LENGTH:	
<i>Metric</i>	<i>Imperial</i>
1 millimetre (mm)	0.0394 in
1 centimetre (cm) 10 mm	0.3937 in
1 metre (m) 100 cm	1.0936 yd
1 kilometre (km) 1000 m	0.6214 mi
<i>Imperial</i>	<i>Metric</i>
1 inch (in)	2.54 cm
1 foot (ft) 12 in	0.3048 m
1 yard (yd) 3 ft	0.9144 m
1 mile (1760 Yd)	1.6093 km
1 int nautical mile (2025.4 yd)	1.852 km

Example – Converting Between Systems of Measurement

1. A Canadian football field is approximately 59 m wide. Convert this measurement to the nearest foot.

Set up a ratio:

$$\frac{59m}{ft} = \frac{0.3048 m}{1 ft}, \text{ cross multiply}$$

$$(59) \times 1 = x \times 0.3048, \text{ divide each side by } 0.3048$$

$$\frac{59}{0.3048} = \frac{x(0.3048)}{0.3048}$$

$$194 \text{ ft} = x$$

2. After meeting in Osoyoos, B.C., Mark drove 114 km north and Laura drove 68 mi. south. Determine who drove farther and by how much.
3. Nora knows that she is 5 ft. 7 in. tall. Convert her height into centimetres which she will list on her driver's license application.
4. A truck driver knows that his load is 15 ft. wide. Regulations along his route state that any load over 4.3 m wide must have wide-load markers and an escort with flashing lights. Determine whether this vehicle needs wide-load markers.