

Imperial Conversions

We will be working with units for length. The smallest unit we will use is the inch, followed by a foot, followed by a yard, and finally a mile. Read the top of page 143 and then copy and complete the table below.

IMPERIAL CONVERSION TABLE	
1 foot =	<u>12</u> inches
1 yard =	<u>3</u> feet = <u>36</u> inches
1 mile =	1760 yards = <u>5280</u> feet

Measurements using Imperial Units

What units would you use if you were to tell me your height and weight?

Imperial units are still used in many industries in Canada even though we have adopted SI units, also known as the metric system. The **imperial system** is *not* a decimal system as the measurements were all developed at different times to meet certain needs. Therefore, you must use a **conversion factor** to convert one imperial unit to another.

FIGURE 4.1

Some Common Imperial Units

Length	
<i>Unit</i>	<i>Abbreviation</i>
inch	in or "
foot	ft or '
yard	yd
mile	mi

EXERCISE...Convert each of the following:

a) 78 in = 6 ft 6 in

$$\cancel{78 \text{ in}} \times \frac{1 \text{ ft}}{12 \cancel{\text{ in}}} = 6.5 \text{ ft}$$

$$\left. \begin{array}{l} 72'' \rightarrow 6' \\ 78'' \rightarrow 6'6'' \end{array} \right\}$$

b) 15 ft = 180 in

$$15 \text{ ft} \times \frac{12 \text{ in}}{1 \text{ ft}} = 180 \text{ in}$$

c) 2.5 mi = 158400 inches

$$\cancel{2.5 \text{ mi}} \times \frac{1760 \text{ yd}}{1 \cancel{\text{ mi}}} \times \frac{3 \text{ ft}}{1 \text{ yd}} \times \frac{12 \text{ in}}{1 \text{ ft}}$$

d) $250'' = \underline{20.83} \text{ ft}$ OR $20 \text{ ft} + 10 \text{ in}$
 $250 \text{ in.} \times \frac{1 \text{ ft}}{12 \text{ in.}}$

e) $500 \text{ yds} = \underline{1500} \text{ ft}$ $500 \text{ yd.} \times \frac{3 \text{ ft}}{1 \text{ yd}}$

f) $7' 2'' = \underline{2} \text{ yd} \underline{1} \text{ ft} \underline{2} \text{ in}$
 $7 \times 12 + 2 = 86 \text{ in.} \times \frac{1 \text{ ft}}{12 \text{ in.}}$
 $7 \text{ ft} \times \frac{1 \text{ yd}}{3 \text{ ft}} = 2.\bar{3}$

g) $1\,000\,000 \text{ in} = \underline{15.782} \text{ mi}$

$1\,000\,000 \text{ in} \times \frac{1 \text{ yd}}{36 \text{ in}} \times \frac{1 \text{ mi}}{1760 \text{ yd}}$

$15 \text{ mi } 1377 \text{ yd } 2 \text{ ft } 4 \text{ in}$

HOMework...

 Worksheet - Converting Imperial Lengths.docx

Attachments

Worksheet - Converting Imperial Lengths.docx