Measuring in Imperial

Since we live in close proximity to the United States we also need to know how to convert imperial units to other imperial units. First, we will discover how much each unit is worth compared to other imperial units. Many trades work in imperial measures. Much of our construction in Canada focuses on imperial measures.

There are only 3 countries in the world that officially use imperial for their standard of measurement; Myanmar, Liberia and the United States.

Imperial Conversions

not the same as the metric system

Imperial System: US system and also used in the trades.

The base unit for length is a _inches and feet_

The imperial system is not a decimal system. Instead each group of units has a particular relationship.

- 12 inches in 1 foot
- 3 feet in each yard

| Some common Imperial Units ||
Unit	Abbreviation
Inch	in or "
Foot	ft or '
Yard	yd
Mile	mi

To convert imperial units, it is easy to use a _proportion_ .

- The proportion is created using the imperial conversion
- When creating the proportion, make sure that each level is the same
- When completing the proportions, multiply the pair, divide by the spare

- Imperial conversion to know …

1 foot = __12__ inches
1 yard = __3__ feet = __36__ inches
1 mile = __1760__ yards = __5280__ feet

Try these:

$$\frac{1\ foot}{12\ inches} = \frac{x}{68\ inches}$$

$$x = 5.\overline{6}\ ft$$

$$\frac{1\ yard}{3\ feet} = \frac{7.5\ yards}{x}$$

$$x = 22.5\ ft$$

You can also either __multiply__ or __divide__ to find the conversion. Think about which measurement should be larger to figure out whether you should multiply or divide.

2 miles to feet

$$5280 \times 2 = 10560\ ft$$

3 feet to inches

$$\frac{1\ ft}{12\ in} = \frac{3\ ft}{x} \qquad x = 36\ in$$

Conversions between Inches and Feet

To convert feet and inches to inches __X__ the number of feet by __12__ because that is how many $''$ are in one $'$. __Add__ the rest of the inches.

7 feet 3 ¾ inches

$$7 \times 12 = 84\ in$$
$$84 + 3\frac{3}{4} = 87\frac{3}{4}\ in$$

13 feet 9 ½ inches

$$13 \times 12 = 156\ in$$
$$156 + 9\frac{1}{2} = 165\frac{1}{2}''$$

To convert inches to feet and inches, __÷__ the number of inches by __12__. Multiply the number of feet by __12__ to find the number of inches in that foot measurement. __Subtract__

_____the last number from the number of inches to find the left over …

38 ¼ inches

$$38 \div 12 = 3.1\overline{6}$$
$$3 \times 12 = \boxed{36} \quad \#\ of\ feet$$
$$38 - 36 = 2$$

$$3\ ft\ 2\frac{1}{4}\ in$$

120 ¾ inches

$$120 \div 12 = 10 \qquad *no\ left\ overs!$$

$$10\ ft\ \frac{3}{4}\ in$$

Assignment