

1.3 Relating SI & Imperial Units

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11:19 AM

- each measurement in the Imperial system relates to a corresponding measurement in the SI system.
(metric system)
- some conversions are exact

ex. $\left\{ \begin{array}{l} 1 \text{ in.} = 2.54 \text{ cm} \\ 1 \text{ yd} = 91.44 \text{ cm} \end{array} \right\}$ SI units

SI units to Imperial Units | Imperial to SI units

$$1 \text{ mm} = \frac{1}{100} \text{ in.}$$

$$1 \text{ in.} = 2.5 \text{ cm}$$

$$1 \text{ cm} = \frac{1}{10} \text{ in.}$$

$$1 \text{ ft.} = 30 \text{ cm}$$

Ex 1

59 m wide. ? feet?

$$1 \text{ yd} = \frac{3 \text{ ft}}{3} = \frac{0.9144 \text{ m}}{3}$$

$$\frac{3.28 \text{ ft}}{1 \text{ m}} = \cancel{\frac{x \text{ ft.}}{59 \text{ m}}}$$

$$1 \text{ m} = 3.28 \text{ ft}$$

$$193.5 = x$$

$$1 \text{ m} = 3.28 \text{ ft}$$

$$143.5 = x$$

$\approx 194 \text{ ft}$

Ex2

$5 \frac{7}{12} \text{ in. tall. ? height in cm?}$

$$5 \frac{7}{12} = \frac{67}{12}$$

5 ft 7 in
↓ ↓

$$1 \text{ ft} = 30 \text{ cm}$$

$$5 \times 30$$

$$= 150$$

$$1 \text{ in.} = 2.5 \text{ cm}$$

$$7 \times 2.5$$

$$= 17.5 \text{ cm}$$

$$= [167.5 \text{ cm}]$$

Exercised on pg. 22 4-9