

The Imperial System

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The imperial system of measurement or **Imperial Units** is a set of units, with the foot being the base unit

For measurements of length, the imperial system uses inches, feet, yards and miles

$$\text{inches} \xrightarrow[\times 12]{\div 12} \text{feet} \xrightarrow[\times 3]{\div 3} \text{yards} \xrightarrow[\times 1760]{\div 1760} \text{miles}$$

unit	Symbol
inch	" or in.
foot	' or ft
yard	yd
mile	mi.

Imperial Ruler shows inches which are divided into 16th
↳ in between each division is another line which marks each 1/4 of an inch

Ex.#1 Convert

(a.) 40 ft. = _____ in.

Data book

1 ft = 12 in.

$$(a.) \quad 40 \text{ ft.} = \underline{\hspace{2cm}} \text{ in.}$$

$$40 \cancel{\text{ft.}} \times \frac{12 \text{ in}}{1 \cancel{\text{ft}}} = \frac{40 \times 12}{1} = \boxed{480 \text{ in.}}$$

$$1 \text{ ft.} = 12 \text{ in.}$$

$$(b.) \quad 7 \text{ yd } 2 \text{ ft.} = \underline{\hspace{2cm}} \text{ ft.}$$

$$7 \cancel{\text{yd}} \times \frac{3 \text{ ft}}{1 \cancel{\text{yd}}} = 21 \text{ ft.} + 2 = \boxed{23 \text{ ft.}}$$

$$1 \text{ yd.} = 3 \text{ ft.}$$

$$(c.) \quad 7 \frac{1}{4} \text{ ft} = \underline{\hspace{2cm}} \text{ in.}$$

$$\downarrow$$
$$7.25 \cancel{\text{ft.}} \times \frac{12 \text{ in}}{1 \cancel{\text{ft}}} = \boxed{87 \text{ in}}$$