

Imperial Lengths

Length = the distance to a place or around something

<u>Unit</u>	<u>Abbrev</u>	<u>Referent</u> (a reference or approx. size)
inch	in. / "	thumb length
foot	ft. / '	shoe length
yard	yd.	1 arm length
mile	mi.	20 min relaxed walk



Uses

- All distances in U.S.A ex. *Wpg to Grand Forks 150 mi.*
- people's heights ex. *Koby Bryant 6' 6" and Yao Ming 7' 6"*
- construction/wood working ex. *2" x 4" x 8'*
- home size ex. *1200 sq ft = 40' long by 30' wide*
- yard size ex. *50 ft wide by 110 ft long*



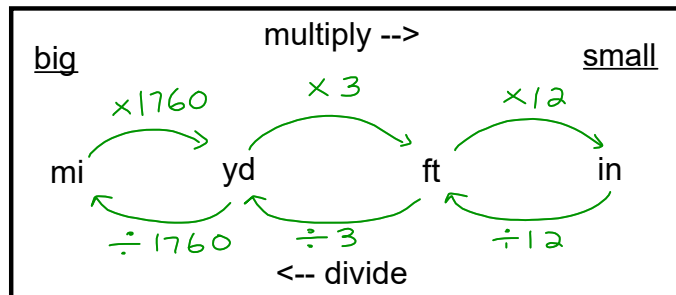
Imperial Conversion Factors

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

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

$$1 \text{ mi} = \underline{1760} \text{ yd}$$

A Method to Convert



ex 1 a) $7 \text{ yd} = \underline{21} \text{ ft}$

b) $8 \text{ yd} = \underline{288} \text{ in}$

ex 2 a) $700 \text{ yds} = \underline{0.39} \text{ mi}$

b) $3000 \text{ ft} = \underline{0.57} \text{ mi}$

c) $10\,000 \text{ in} = \underline{0.16} \text{ mi}$

ex 3 $4 \text{ yd } 2 \text{ ft } 8 \text{ in} = \underline{176} \text{ in}$

$$4 \text{ yd} = \underline{144} \text{ in}$$

$$2 \text{ ft} = \underline{24} \text{ in}$$

$$+ 8 \text{ in}$$

Ex 1: Jana has 4 yd of cord and wants to make bracelets. Each bracelet needs 8 in. of cord. How many can she make?

$$4 \text{ yd} = \underline{144} \text{ in}$$

$$\frac{144}{8} = 18 \text{ bracelets}$$

Ex 2: Jim wants to buy baseboard for his bedroom. The perimeter of the bedroom is 37 ft.

- a) How much baseboard is needed, in yards?
 b) How much will it cost to put down a baseboard for \$5.99/yd?

a) $37 \text{ ft} = \underline{12.\overline{33}} \text{ yd}$

b) ~~$12.\overline{33} \times 5.99 = \73.88~~

$13 \times 5.99 = \boxed{\$77.87}$

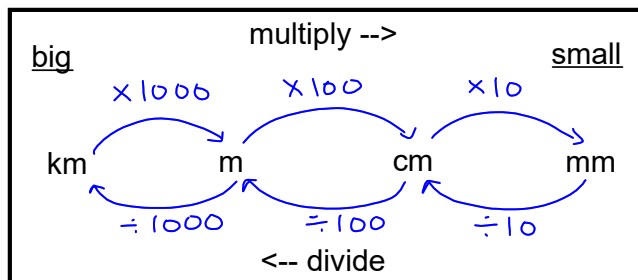
store only sells whole units →
 ← round up to have enough

Metric Conversions

1 cm = 10 mm

1 m = 100 cm

1 km = 1000 m



ex 1) 2m = 2000 mm

ex 2) 450 cm = 0.0045 km

0.00450

ex 3) 78 mm = 7.8 cm

ex 4) 0.23 m = 23 cm

ex 5) 100000 mm = 0.1 km