

Chapter 6 section 3 Unit Conversion – American System

Unit of Length

$$1 \text{ foot (ft)} = 12 \text{ inches (in)}$$

$$1 \text{ mile (mi)} = 5280 \text{ feet}$$

$$1 \text{ yard(yd)} = 3 \text{ feet}$$

$$\text{conversion factor: } \frac{1 \text{ yd}}{3 \text{ ft}} = 1$$

change 36 feet to yards

$$36 \text{ feet} = 36 \text{ feet} \cdot 1$$

$$= 36 \text{ feet} \cdot \frac{1 \text{ yd}}{3 \text{ feet}} \quad \text{notice the units, feet, reduce so the units remaining is yd.}$$

Make a conversion factor.

Try:

18 yds to feet 24 inches to feet 4 yards to inches 2 miles to yards

Unit of weight

$$1 \text{ pound (lb)} = 16 \text{ ounces (oz)}$$

$$1 \text{ ton} = 2000 \text{ pounds}$$

Make a conversion factor.

Try

$$2\frac{1}{2} \text{ pounds to ounces} \quad 3.2 \text{ tons to ounces}$$

Unit of Volume

$$1 \text{ cup (c)} = 8 \text{ fluid ounces (fl oz)}$$

$$1 \text{ pint(pt)} = 2 \text{ cups}$$

$$1 \text{ quart (qt)} = 2 \text{ pints}$$

$$1 \text{ gallon(gal)} = 4 \text{ quarts}$$

Make a conversion factor.

Try:

5.6 gallons to pints

How many cups in a gallon?

Unit of Time

1 minute(min)	= 60 seconds (s)
1 day	= 24 hours(hr)
1 hour	= 60 minutes
1 year(yr)	= 365 days(day)

Make a conversion factor.

Try:

How many seconds in a year?

How many hours in 7 days?

Make several conversion factors.

Converting Units of Speed

A women's softball pitcher can throw her fastball at 60 miles per hour. How fast is this in feet per second? Round the answer to the nearest foot per second.

San Jose to Los Angeles is approximately 360 miles. If you can travel this distance in 5 hours, how fast are you going?