

Practice Problems on Unit Conversion

These are practice problems that will help you convert from one unit to another. This is useful in math, science and real life.

1 meter = 100 cm	1km = 1000 m	1 inch = 2.54 cm exactly	12 in = 1 foot
1 mi = 5280 ft	1kg = 1000 g	2.2 lb. = 1 kg	1 qt = 2 pt
4qt = 1 gal	1 qt = 0.946 L	16 oz. = 1 lb	1 L = 1000 mL
1 cc = 1cm ³	Centi = hundredth	Milli = thousandth	Kilo = thousand

For all problems, please *show your fraction setup and give your answer with the correct units.*

Steps to solve any conversion problem.

1. Write down where you are starting, and where you want to end up. *For number 1a. below, we start with grams and want to get to pounds. g. → lbs*
2. Place the number you are given over one. $\frac{3598 \text{ grams}}{1}$
3. Place a fraction next to the units you want to cancel, that are moving in the right direction to what you need.

$$\frac{3598 \text{ grams}}{1} \times \frac{1 \text{ pounds}}{454 \text{ grams}}$$

See how the grams units will cancel.

Remember: Top cancels bottom, bottom cancels top
4. Set up all the fractions first, there may be more than one. Make sure your desired unit is on top.
5. Cancel the fractions to make sure that everything is accounted for.
6. Multiply all the numbers on top of the fractions (numerators), then divide by all the numbers below the fraction line (denominators.) You can ignore all the 1's

$$\frac{\cancel{3598 \text{ grams}}}{1} \times \frac{1 \text{ pounds}}{\cancel{454 \text{ grams}}} \quad \text{3598 on top, and 454 on the bottom means that 3598 is divided by 454, making 7.93}$$

7. Write your answer with the appropriate units and place a box around it. 7.93 lbs.

Remember you can use any of the conversions shown above.

PRACTICE PROBLEMS (WORK AT YOUR OWN PACE)

- 1a. Convert 3598 grams into pounds.
 1. The ceiling is 9 feet tall, how many inches is that?
 2. Convert 231 grams into ounces (this will be a 3-step process)
 3. A beaker contains 578 mL of water. What is the volume in quarts?
 4. How many kilometers away is Lincoln, Nebraska, if it is 450 miles away?
 5. Which is longer: 10 kilometers or 6.5 miles?
 6. What is 0.0032 gallons in cL?
 7. Who weighs more: the football linebacker at 240 pounds, or the rugby player at 115 kg?
 8. Which has more volume: 2 pints of chocolate milk, or 900 mL of strawberry milk?
 9. Mr. Willsea had 236 mL of chocolate milk yesterday, how many pints is this?
 10. A box measures 3.12 ft in length, 0.0455 yd in width and 7.87 inches in height. What is its volume in cubic centimeters? What is its volume in mL?