Weight Conversions

There are two systems used for measurements: the U.S. system of measurement (which includes pounds, ounces, gallons, pints, etc.) and the metric system of measurement (which includes grams, liters, meters).

Conversion factors are used to convert between different units within the same system of measurement (for example, gram to kilograms, or between different systems of measurement ounces to grams). This worksheet focuses on conversions within one system of measurement, either metric or imperial, but the same strategy can be applied if you need to convert from metric to imperial.

1 ounce = 28.35 grams	*1 gram = 0.035 ounces*
1 pound = 454 grams	*1 kilogram = 2.2 pounds*
1 pound = 16 ounces	*1 kilogram = 1000 grams*

Example 1: A recipe calls for 2 ounces (oz) of confectioner's suger. How many grams would you need?

Answer: We set up a conversion fraction to go from the unit we *have* to the unit we *want*. We ***have*** ounces, but we ***want*** grams. The unit you have goes on the bottom of the fraction, the unit you want goes on the top.

$$2\ \text{oz} \times \frac{28.35\ \text{grams}}{1\ \text{oz}} = 58.70\ \text{grams confectioner's sugar}$$

This math says that we should multiply 2 by 28.35, and then divide by 1. This gives us 58.70 grams of confectioner's sugar.

Example 2: A bread recipe calls for 2500 g of flour. How much flour is this in kg?

Answer: Set up a conversion fraction to translate between the unit we *have* and the unit we *want*. The prefix kilo- means 1000, so we use the following fraction:

$$2500\ \text{g} \times \frac{1\ \text{kg}}{1000\ \text{g}} = 2.5\ \text{kg}$$

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Practice Exercises

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1. Fill in each row of the table below with the conversion fraction needed to convert to the new unit listed. Then calculate what the recipe amount would be in the new unit.

Recipe amount	Convert to:
(a) 10 lbs	kg
(b) 2.25 lbs	g
(c) 3.5 lbs	oz
(d) 218 oz	kg
(e) 15 oz	g
(f) 12 oz	lbs
(g) 2640 g	kg
(h) 120 g	lbs
(i) 352 g	oz
(j) 12 kg	lbs
(k) 26 kg	g
(l) 0.85 kg	oz

2. Determine the amounts needed in grams for the croissant recipe by filling in the table below:

Ingredient	Amount	Amount in grams
Milk	1 lb 14 oz	
Yeast	2 oz	
Sugar	2 oz	
Salt	1 oz	
Butter, softened	6 oz	
Bread flour	3 lb 8 oz	
Butter	2 lb	

Answers:

1.

Recipe amount	Convert to:
(a) 10 lbs	4.54 kg
(b) 2.25 lbs	1021.5 g
(c) 3.5 lbs	56 oz
(d) 218 oz	6.1803 kg
(e) 15 oz	425.25 g
(f) 12 oz	0.75 lbs
(g) 2640 g	2.64 kg
(h) 120 g	0.2625 lbs
(i) 352 g	12.32 oz
(j) 12 kg	26.4 lbs
(k) 26 kg	2600 g
(l) 0.85 kg	29.75 oz

2.

Ingredient	Amount	Amount in grams
Milk	1 lb 14 oz	850.5
Yeast	2 oz	56.7
Sugar	2 oz	56.7
Salt	1 oz	28.35
Butter, softened	6 oz	170.1
Bread flour	3 lb 8 oz	1587.6
Butter	2 lb	907.2