Are you surprised that math is used in the kitchen? Chefs need to measure ingredients to make sure their recipes come out tasting right and are the same each time. There are different units of measurements for liquid and dry ingredients. There are also different measuring systems depending on where you are in the world – U.S. (also called “standard”) and metric. Use the table below as a reference to help you in your kitchen measurements.

**Cooking Measurements**

**U.S.-to-Metric System**

**Cooking Equivalents**

- 1 tbsp = 3 tsp
- 1/16 cup = 1 Tbsp
- 1/8 cup = 2 Tbsp
- 1/6 cup = 2 Tbsp + 2 tsp
- 1/4 cup = 4 Tbsp
- 1/3 cup = 4 Tbsp + 1 tsp
- 3/8 cup = 6 Tbsp
- 1/2 cup = 8 Tbsp
- 2/3 cup = 10 Tbsp + 2 tsp
- 3/4 cup = 12 Tbsp
- 1 cup = 16 Tbsp
- 1 cup = 48 tsp
- 1 cup = 8 oz
- 2 cups = 1 pt
- 2 pt = 1 qt
- 4 cups = 1 qt
- 4 qt = 1 gal
- 16 oz = 1 lb

**Metric System to U.S.**

**Converting Fluids**

- 1 mL = 1/5 tsp
- 5 mL = 1 tsp
- 15 mL = 1 Tbsp
- 30 mL = 1 fl oz
- 47 mL = 1/5 cup
- 100 mL = 3.4 fl oz
- 237 mL = 1 cup
- 474 mL = 2 cups
- .95 L = 4 cups
- 3.8 L = 4 qt (1 gal)
- 1 L = 34 fl oz
- 1 L = 4.2 cups
- 1 L = 2.1 pt
- 1 L = 1.06 qt
- 1 L = .26 gal

**Converting Weight**

- 1 g = .035 oz
- 100 g = 3.5 oz
- 500 g = 1.10 lb
- 1 kg = 2.205 lb
- 1 kg = 35 oz

**Volume:** the amount of 3-dimensional space something occupies, or the amount an object can hold

**Volume Measurement Abbreviations**

- mL = milliliter
- L = liter
- fl oz = fluid ounce
- gal = gallon
- tsp = teaspoon
- Tbsp = tablespoon
- qt = quart
- pt = pint

**Weight:** the heaviness, or downward force on an object caused by gravity

**Weight Measurement Abbreviations**

- g = gram
- lb = pound
- oz = ounce (weight)
Most moderately active 10- to 11-year olds need:

**Fruit:** 1½ cups per day  
**Vegetables:** 2½ cups per day*

*Remember!

The amount of fruits and vegetables you need each day is determined by your age, gender, height, weight, and how active you are.

Use measuring tools to test your kitchen math skills:

1) Measure 1 cup of dry beans to see what 1 cup looks like. Put a cup of beans on a plate. Then, put 1 cup of beans in a bowl. Describe the size of a cup by comparing it to a familiar object:

2) Measure 1 cup of water and pour it into a drinking glass. Is there a difference between what a liquid “cup” and a dry “cup” look like?

3) Measure out following, then convert the daily recommended amounts to milliliters:

   - 1½ cups fruit/day = _____________ mL
   - 2½ cups vegetables/day = _____________ mL

Convert the following measurements:

4) 15½-oz can of beans = _____________ cups
5) 8-oz of pasta = _____________ cups
6) 1½ cups of fruit = _____________ Tbsp
7) 2½ cups of chopped tomatoes = _____________ oz
8) 32-oz of green beans = _____________ lb

Find three measurements on a food or beverage package to convert to another unit.

9) _________________ = _________________
10) _________________ = _________________
11) _________________ = _________________

What counts as 1 cup of fruits or vegetables?

- small bowl (8-oz) of veggies
- 2 cups of raw leafy greens
- 8-oz glass of 100% fruit juice
- small bowl (8-oz) of fruit
- ½ cup of dried fruit

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