COOKING UNIT CONVERSIONS

Converting cooking or other weight/volume unit measurements is quick and easy. To convert cooking units, enter the quantity, press the cooking unit key/label, and then press the convert [Conv] key. To enter fractions (e.g., 1/2 cup), use the fraction [/] key.

Also, some units (like gallons) don't have dedicated keys, but are second functions of primary keys. These are color-labeled over various number/digit or other keys. They can be accessed using the [Conv] key.

Note: It is incorrect to convert volumes to weights and vice versa (weights vary, e.g., a cup of flour weighs less than a cup of water); thus, the calculator will not allow you to do so. The calculator will display an error and the word "Sorry" if this occurs.

Convert 1-1/2 tsp. to tbsp.:

Keystroke	Display
1 1 [/] 2 [tsp] [Conv] [tbsp]	0-1/2 TBSP

Convert 8 fl. oz. to cups:

Keystroke	Display
8 [fl oz] [Conv] [cup]	1 CUP

Convert 5-1/2 quarts to gallons:

Keystroke	Display
5 1 [/] 2 [Conv] [8] (quart)	5-1/2 QT
[Conv] [7] (gal)	1-3/8 GAL

Convert 32 dry oz. to lbs:

Keystroke	Display
32 [dry oz] [Conv] [lb]	2 LB

Converting Fractions to Decimals

To convert cooking measurement units to and from fraction and decimal values, follow the example below:

- e.g., Enter 1/3 cup and convert to decimal, then back to fraction:

Keystroke	Display
1 [/] 3 [cup] [cup]	0.333 CUP
[cup]	0-1/3 CUP

Note: If the value entered is not a "kitchen fraction," (e.g., 1/3 TBSP) the next press of the cooking unit key (e.g., [Tbsp]) will display the rounded "kitchen value" (e.g., 0-1/2 TBSP) and a third press will display the actual decimal value (e.g., 0.333 TBSP).

RECIPE SCALING

One of the most useful features of the KitchenCalc is its ability to adjust recipes. It calculates new ingredient amounts when you change the number of servings a recipe makes (e.g., when you want it to serve 10 people instead of only 4). This allows you to cook or bake with precision by measuring the correct ingredient quantities. The KitchenCalc also lets you adjust ingredients when you change a recipe's portion size (e.g., if you want to serve 4 oz. portions for each person, instead of 6 oz.). See examples below.

CHANGING THE NUMBER OF SERVINGS

Basic Example

You'd like to make 5 servings of instant brown rice, but the box only lists a measuring chart for 4 servings (add 2 cups of rice and 1-3/4 cups of water). How much rice and water do you need for five servings?

Keystroke	Display
1) Enter current Number of Servings:	
4 [Recipe # Servings]	4. Rcp #
2) Enter desired Number of Servings:	
5 [Actual # Servings]	5. Act #
3) Enter ingredient amounts and press [Adjust Recipe]:	
2 [cup] [Adjust Recipe]	2-1/2 CUP (rice)
1 3 [/] 4 [cup] [Adjust Recipe]	2-1/4 CUP (water)

(You should therefore add 2-1/2 cups of rice and 2-1/4 cups of water to make 5 servings)

Increasing No. of Servings

You need your brownie pudding cake recipe to yield 12 servings instead of 8. The recipe contains the following ingredients:

- 1-1/4 cups flour
- 1-1/2 cups sugar
- 1/2 cup unsweetened cocoa powder
- 2 tsp. baking powder
- 3 tbsp. butter or margarine, etc.

Convert the ingredients to 12 Servings:

Keystroke	Display
1) Clear Recipe Memory:	
[Conv] [x] (Clear Recipe)	0.
2) Enter recipe's Number of Servings:	
8 [Recipe # Servings]	8. Rcp #
3) Enter desired Number of Servings:	
12 [Actual # Servings]	12. Act #
4) Enter ingredient measurements and press [Adjust Recipe]:	
1 1 [/] 4 [cup] [Adjust Recipe]	1-7/8 CUP (flour)
1 1 [/] 2 [cup] [Adjust Recipe]	2-1/4 CUP (sugar)
1 [/] 2 [cup] [Adjust Recipe]	0-3/4 CUP (cocoa)
2 [tsp] [Adjust Recipe]	3 TSP (baking powder)
3 [tbsp] [Adjust Recipe]	4-1/2 TBSP (butter/margarine)

Increasing Number of Dozen

A cookie recipe currently yields 3 dozen cookies, but you'd like to make 12 dozen. The recipe contains the following:

- 1-2/3 cups flour
- 1-1/4 tsp. baking soda
- 3/4 tsp. baking powder
- 1/2 lb. butter
- 3/4 cup sugar
- 1 egg, etc.

Convert the ingredients to yield 12 dozen:

Keystroke	Display
1) Clear Recipe Memory:	
[Conv] [x] (Clear Recipe)	0.
2) Enter recipe's stated yield (3 dozen) into the [Recipe # of Servings] key:	
3 [Recipe # Servings]	3. Rcp #
3) Enter desired yield (12 dozen) into the [Actual # of Servings] key:	
12 [Actual # Servings]	12. Act #
4) Enter ingredient measurements and press [Adjust Recipe]:	
1 2 [/] 3 [cup] [Adjust Recipe]	6-2/3 CUP (flour)
1 1 [/] 4 [tsp] [Adjust Recipe]	1-1/2 TBSP* (baking soda)
3 [/] 4 [tsp] [Adjust Recipe]	3 TSP (baking powder)
1 [/] 2 [lb] [Adjust Recipe]	2 LB (butter)
3 [/] 4 [cup] [Adjust Recipe]	3 CUP (sugar)
1 [Adjust Recipe]**	4 (eggs)

*Note: The calculator automatically converts to the next largest cooking unit (here, TBSP). If you prefer to see the result in teaspoons, convert to [tsp] (i.e., [Conv] [tsp] = 5 TSP).

**For whole unit ingredients (such as eggs) that don't require a measuring cup or spoon, use the procedure above.

Decreasing No. of Servings

You'd like to decrease your chicken recipe from 6 servings to 4 servings. The recipe contains the following ingredients:

- 2 tsp. dried rosemary leaves
- 1/2 tsp. salt
- 1/4 tsp. black pepper
- 3/4 lb. carrots, etc.

Convert the ingredients to 4 servings:

Keystroke	Display
1) Clear Recipe Memory:	
[Conv] [x] (Clear Recipe)	0.
2) Enter recipe's Number of Servings:	
6 [Recipe # Servings]	6. Rcp #
3) Enter desired Number of Servings:	
4 [Actual # Servings]	4. Act #
4) Enter ingredient measurements and press [Adjust Recipe]:	
2 [tsp] [Adjust Recipe]	1-3/8 TSP (rosemary)
1 [/] 2 [tsp] [Adjust Recipe]	0-3/8 TSP* (salt)
1 [/] 4 [tsp] [Adjust Recipe]	0-1/8 TSP* (pepper)
3 [/] 4 [lb] [Adjust Recipe]	0-1/2 LB (carrots)

*There's an extremely small remainder (0.042 of a teaspoon) you can view by pressing [Conv] [/].
Note: The displayed values are "kitchen fractions," or rounded fractions. To display the actual value, press [Adjust Recipe] again. Press it once more to display the actual decimal value.

CHANGING THE PORTION SIZE

Increasing Portion Size

You're making a stir-fried beef recipe, which is for six-4 oz. servings. If you want to increase the portion size (per person) from 4 oz. to 6 oz., what are the adjusted ingredients?

- 1 lb. flank steak
- 2 tbsp. Chinese cooking wine
- 1 tbsp. minced garlic
- 2 tsp. soy sauce
- 3/4 cup chicken stock, etc.

Convert the ingredients:

Keystroke	Display
1) Clear Recipe Memory:	
[Conv] [x] (Clear Recipe)	0.
2) Enter recipe's Portion Size:	
4 [Conv] [Recipe # Servings]	4. Rcp Sz
3) Enter desired Portion Size:	
6 [Conv] [Actual # Servings]	6. Act Sz
4) Enter ingredient measurements and press [Adjust Recipe]:	
1 [lb] [Adjust Recipe]	1-1/2 LB (flank steak)
2 [tbsp] [Adjust Recipe]	3 TBSP (Chinese cooking wine)
1 [tbsp] [Adjust Recipe]	1-1/2 TBSP (garlic)
2 [tsp] [Adjust Recipe]	3 TSP (soy sauce)
3 [/] 4 [cup] [Adjust Recipe]	1-1/8 CUP (chicken stock)

Decreasing Portion Size

Say the above recipe has a stated portion size of 8 oz., but you only want 3 oz. per person. What are the adjusted ingredients?

- 1 lb. flank steak
- 2 tbsp. Chinese cooking wine
- 1 tbsp. minced garlic
- 2 tsp. soy sauce
- 3/4 cup chicken stock, etc.

Convert the ingredients:

Keystroke	Display
1) Clear Recipe Memory:	
[Conv] [x] (Clear Recipe)	0.
2) Enter recipe's Portion Size:	
8 [Conv] [Recipe # Servings]	8. Rcp Sz
3) Enter desired Portion Size:	
3 [Conv] [Actual # Servings]	3. Act Sz
4) Enter ingredient measurements and press [Adjust Recipe]:	
1 [lb] [Adjust Recipe]	0-3/8 LB (flank steak)

2 [tbsp] [Adjust Recipe]	1 TBSP* (Chinese cooking wine)
1 [tbsp] [Adjust Recipe]	1-1/8 TSP (garlic)
2 [tsp] [Adjust Recipe]	0-3/4 TSP (soy sauce)
3 [/] 4 [cup] [Adjust Recipe]	0-1/4 CUP** (chicken stock)

*Convert to teaspoons to avoid the remainder (i.e., [Conv] [tsp] = 2-1/4 TSP).
**Convert to tablespoons (i.e., [Conv] [tbsp] = 4-1/2 TBSP).

CHANGING BOTH SERVING & PORTION SIZE

Decreasing No. of Servings & Increasing Portion Size

Using the same recipe, you now want to reduce the number of servings from 6 to 4, but increase the portion size from 4 oz. to 8 oz. What are the adjusted ingredients?

- 1 lb. flank steak
- 2 tbsp. Chinese cooking wine
- 1 tbsp. minced garlic
- 2 tsp. soy sauce
- 3/4 cup chicken stock, etc.

Convert the ingredients:

Keystroke	Display
1) Clear Recipe Memory:	
[Conv] [x] (Clear Recipe)	0.
2) Enter recipe's Number of Servings:	
6 [Recipe # Servings]	6. Rcp #
3) Enter desired Number of Servings:	
4 [Actual # Servings]	4. Act #
4) Enter recipe's Portion Size:	
4 [Conv] [Recipe # Servings]	4. Rcp Sz
5) Enter desired Portion Size:	
8 [Conv] [Actual # Servings]	8. Act Sz
6) Enter ingredient measurements and press [Adjust Recipe]:	
1 [lb] [Adjust Recipe]	1-1/3 LB (flank steak)
2 [tbsp] [Adjust Recipe]	2-1/2 TBSP* (Chinese cooking wine)
1 [tbsp] [Adjust Recipe]	1-1/2 TBSP** (garlic)
2 [tsp] [Adjust Recipe]	2-5/8 TSP (soy sauce)
3 [/] 4 [cup] [Adjust Recipe]	1 CUP (chicken stock)

*Convert to teaspoons (i.e., [Conv] [tsp] = 8 TSP) to avoid the remainder.
**Again, convert: [Conv] [tsp] = 4 TSP).
Note: To review your stored Serving or Portion Size values, use the [Rcl] key. For example, to recall desired Portion Size, press [Rcl] [Conv] [Actual # Servings].

TEMPERATURE CONVERSIONS

Convert 30° Celsius to Fahrenheit:

Keystroke	Display
30 [Conv] [2] (°C)	30. °C
[Conv] [3] (°F)	86. °F

Convert 100° Fahrenheit to Celsius:

Keystroke	Display
100 [Conv] [3] [Conv] [2]	37.8 °C

BASIC MATH WITH COOKING UNITS

What is 1-3/4 cups + 2-1/3 cups?

Keystroke	Display
1 3 [/] 4 [cup] [+] 2 1 [/] 3 [cup] [=]	4-1/8 CUP

What is 1/8 tsp x 6?

Keystroke Display	
1 [/] 8 [tsp] [x] [6] [=]	0-3/4 TSP

Find 2 tbsp ÷ 3:

2 [tbsp] [÷] [3] [=]	0-2/3 TBSP

Note: The results of math calculations will be shown as actual, not rounded, "kitchen-fraction" values (see following section for more details).

DISPLAYING ACTUAL FRACTIONS VS. "KITCHEN FRACTIONS"

A unique feature of your calculator is that it will display both actual fractions and "kitchen fractions" during conversions or recipe scaling calculations. That is, if the answer is 3/4 TBSP, it knows there is no "3/4" of a tablespoon, or measuring spoon, available to measure with; instead, it will show the rounded answer (i.e., 1 TBSP). For more precise measuring, you can then press the [Conv] [/] keys to display the remainder amount to add or subtract, or simply convert the value to the next lowest cooking unit (e.g., TSP), to avoid the remainder altogether.

"Kitchen Fractions," or whole units or fractions displayed in recipe scaling calculations or conversions, include:

AVAILABLE KITCHEN FRACTIONS

Tablespoon	Teaspoon	Cup
1 TBSP	1 TSP	1 CUP
1/2 TBSP	7/8 TSP	7/8 CUP
	3/4 TSP	3/4 CUP
	5/8 TSP	2/3 CUP
	1/2 TSP	1/2 CUP
	3/8 TSP	1/3 CUP
	1/4 TSP	1/4 CUP
	1/8 TSP	1/8 CUP

Note: 1/3 TSP, 2/3 TSP, 1/8 TBSP, 1/4 TBSP, 1/3 TBSP, 3/8 TBSP, 5/8 TBSP, 2/3 TBSP, 3/4 TBSP, 7/8 TBSP, 3/8 CUP and 5/8 CUP are not available kitchen fractions.

If you do not want to view "kitchen" values, you can display actual values by pressing the cooking unit key again.
Important Note: The calculator will tell you when an actual value is displayed by displaying the word "Act." See examples below:

Basic Math-Displaying Actual vs. Kitchen Fractions

Find 5-1/2 tbsp ÷ 2:

Keystroke	Display
5 1 [/] 2 [tbsp] [÷] [2] [=]	2-3/4 TBSP (Actual Fraction)
[tbsp]	3 TBSP (Kitchen Fraction)*
[tbsp]	2.75 TBSP (Actual Decimal Value)

*Here, the calculator rounded up to a measuring spoon value you can actually measure with (as there are no "3/4 tbsp" size measuring spoons).

Conversions-Displaying Actual vs. Kitchen Fractions

Convert 2-3/4 tbsp to a "kitchen fraction," actual decimal value, then return to the entered value:

Keystroke	Display
2 3 [/] 4 [tbsp]	2-3/4 TBSP
[Conv] [tbsp]	3 TBSP (Kitchen Fraction)*
[tbsp]	2.75 TBSP (Actual Decimal Value)
[tbsp]	2-3/4 TBSP (Actual Fraction)

*Here, the calculator rounded up to a unit you can actually measure with.

Recipe Scaling-Actual vs. Kitchen Fractions Displayed

When performing Recipe Scaling using the [Adjust Recipe] key and the answer is in a fractional format that does not support existing measuring spoons or cups (see "Available Kitchen Fractions" on previous page), the "kitchen fraction" value will be displayed

first. A second press of the [Adjust Recipe] key will display the actual fraction value. A third press will display the actual decimal value.

USING THE TIMER

Your calculator functions not only as a cooking unit converter and recipe scaler, but also as a kitchen timer. The audible timer counts up and down. See instructions below:

Using the Timer- Press [Timer] to access the built-in timer or timer mode. The timer can be set to count down from 24 hours or less. The timer will count up to 12 hours.

Count Up and Pause Timer - Once in timer mode, press [Timer] again to start counting up. Press it once more to pause or freeze counting. Continue counting by pressing [Timer].

Count Down and Stop Timer - To set the timer to count down, follow this example: Set the timer for a baking time of 1 hour, 30 minutes:

Description/Keystroke	Display
Access timer: [Timer]	0:00:00
Enter 1 hour: 1	0:00:01
Enter 30 min.: 3 0	0:01:30
Enter 0's for sec.: 0 0	1:30:00
Start Timer: [Timer]	1:30:00

Note: Press [Timer] again to pause counting down. Press it once more to continue.

Clear the Timer Display - Press [On/C].
Important Note: You must first pause the timer if it's counting, then press [On/C].

Exit the Timer - To clear and exit the timer mode (once the timer is paused), press [On/C] twice. To exit the timer mode without clearing the timer, press [On/C] only once, or press any non-timer key. Note: If the timer is not cleared, the clock symbol will continue to blink on the display to remind you the timer is running.

Using the Calculator While Timing - You can also use the calculator while timing and it will not interfere with timer operations. To do this, press [On/C] to exit the timer mode and continue to use calculator functions. To return to the timer mode, press [Timer] again.

Note: The clock symbol will continue to blink on the display to remind you the timer is running when in "calculator" mode.

Timer Alarm - After the timer is finished counting up or down, you will hear an audible alarm. To clear the timer alarm, press the [Timer] key.

Timer Reminder & Alarm - If you are in "calculator" mode and do not press a key for 11 minutes, the running timer will be displayed as a reminder. Also, in case you forget the timer, after the timer alarm goes off it will begin counting up for an additional hour, displaying the "+" sign to remind you of the amount of time elapsed since the alarm sounded.

Auto Shut-Off - If the timer is left on after the timing period expires, and you are not using the calculator, the calculator will automatically shut off in:

• Count-down timer: 1 hour, 11 minutes
• Count-up timer: 12 hours, 11 minutes

KEY DEFINITIONS

[On/C] - On/Clear Key
Turns power on. Pressing once clears the display. Pressing twice clears any previously entered value.

[Conv] [On/C]- Off
Turns all power off.

[Rcl] - Recall
Recalls stored values (e.g., [Rcl] [Recipe # Servings]).

[0] - [9] and [•]
Digits used for keying in numbers.

[+] [-] [x] [÷] [=]
Arithmetic operation keys.

[Conv] [÷] - Percent (%)
Four-function percent.

[Conv] - Convert
Converts to various unit keys (e.g., cooking units, temperature).

[Conv] [+] - (M+) Memory
Adds displayed value to the standard, cumulative Memory. (To subtract from Memory, press a value, then [Conv] [-] [Conv] [+]).

[Conv] [Rcl] - Recall Memory

[Conv] [Rcl] [Rcl] - Clear Memory

[Conv] [-] - Change Sign (+/-)
Changes the sign of the displayed value from plus to minus and vice versa.

[Conv] [x] - Clear Recipe Memory
Clears the values entered into the # of Servings and Portion Size keys, as these values are stored in memory (i.e., remain stored even after you turn your calculator off).

[Conv] [x] [x] - Clear All
Clears all stored values, including memory, serving and portion sizing.

Cooking Unit Keys

[lb] - Pound
Enters or converts to pounds.

[dry oz] - Dry Ounce
Enters or converts to dry ounces.

[fl oz] - Fluid Ounce
Enters or converts to fluid ounces.

[cup] - Cup
Enters or converts to cups.

[tbsp] - Tablespoon
Enters or converts to tablespoons.

[tsp] - Teaspoon
Enters or converts to teaspoons.

[/] - Fraction Bar Key
Used to enter fractions (e.g., 1 [/] 3 [cup]).

[Conv] [/] - Rnd +/- (Remainder)
Displays the fractional remainder (if applicable), due to calculator rounding. This is an optional calculation and should be used if you want more precise measurements. When the calculator has rounded by more than 5%, the display will read ^Rnd (it has rounded up) or vRnd (rounded down). When this occurs, press [Conv] [/] to display the remainder. A plus (+) tells you to add the additional measurement, and a (-) tells you to subtract-e.g., [Conv] [/] = + 0-1/2 TSP means you should add an additional 1/2 teaspoons of the ingredient. Note: If you want to minimize rounding altogether, convert to the next smallest cooking unit (e.g., if it reads tablespoons, convert to teaspoons).

[Timer] - Built-in Cooking Timer
Accesses the count up/count down timer.

2nd Functions-Additional Conversion Units

[Conv] [0] - g or gram
[Conv] [1] - kg or kilogram
[Conv] [2] - °C or Celsius
[Conv] [3] - °F or Fahrenheit
[Conv] [4] - liter
[Conv] [5] - centiliter (100 ml)
[Conv] [6] - ml or milliliter
[Conv] [7] - gal or gallon
[Conv] [8] - quart
[Conv] [9] - pint

[Conv] [•] - dash
[Conv] [=] - pinch

Recipe Scaling Keys

Use the keys below to "scale" recipes (when you're cooking or baking for less or more than the recipe's stated serving size, and have to calculate adjusted ingredient quantities). Your calculator quickly converts recipe ingredients to their proper proportions, so you can cook or bake precisely and avoid measurement errors.

First, find the recipe's stated number of servings or yield, and then determine how many servings you need to make (if other than the stated serving size). Use the keys below to enter the "stated" and "desired" serving sizes (and/or portion sizes), enter each ingredient quantity and press [Adjust Recipe] to convert each ingredient to its new, adjusted quantity.

Note: You may prefer to write the new quantities on a piece of paper, or note them next to the recipe's ingredients, or simply measure new ingredient amounts as you go.

[Recipe # Servings] - Recipe's Number of Servings
Enters the recipe's stated number of servings.

[Actual # Servings] - Actual Number of Servings
Enters your desired number of servings.

[Conv] [Recipe # Servings] - Recipe's Portion Size
Enters the recipe's stated per person portion size.

[Conv] [Actual # Servings] - Actual Portion Size
Enters your desired per person portion size.

[Adjust Recipe] - Recipe Adjust
Calculates adjusted ingredient sizes based on entered Number of Servings and/or Portion Size.

[Rcl] [Adjust Recipe] - Recipe Scale Factor
Displays the ratio used for adjusting ingredients.

Note: Values entered in Recipe Scaling Keys are stored permanently, so use [Conv] [x] to clear them prior to entering a new problem. Also, to review stored values, press [Rcl] and the applicable key. For example, to review your stored Recipe's Number of Servings, press [Rcl] [Recipe # Servings]. To review your stored Recipe's Portion Size, press [Rcl] [Conv] [Recipe # Servings]).

ERRORS

When an incorrect attempt to convert between liquid measures, dry measures, or temperature occurs, the calculator will display the word "Sorry" for a few seconds before showing the initial value on the display. If an error is displayed, press any key.

RESET

If your calculator's display should ever freeze or "lock up," press Reset-a small hole located above the **[dry oz]** key-using the end of a paper clip.

ACCURACY

Each calculation is carried out internally to 10 digits.

AUTO SHUT-OFF & BATTERIES

Auto Shut-Off: After 11 min. of non-use (except when in Timer Mode; see "Using the Timer").

Batteries Included: Two LR-43 batteries.

Battery-Life (Average Use of Calculator & Timer): 775 hours
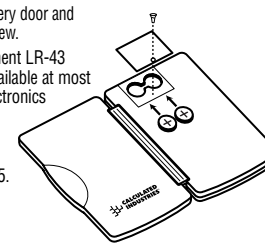
To Replace the Batteries:

To replace the batteries, use a small Phillip's head screwdriver (or you can also use a screwdriver found in eyeglass repair kits) and unscrew the single screw in the center of the battery door, located on the back of the calculator (see diagram).

Carefully remove the battery door, remove the old batteries from the clips and replace them with two new LR-43 batteries. Make sure the positive sides (+) are facing up.

Replace the battery door and re-attach the screw.

Note: Replacement LR-43 batteries are available at most discount or electronics stores. Or, call Calculated Industries at 1-800-854-8075.

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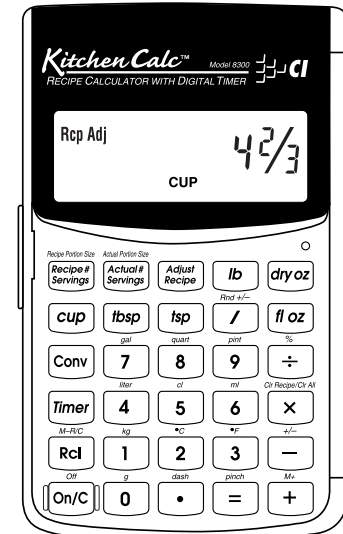
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