

Table 5
Decimal Weight Equivalents

Ounces	Pounds	Ounces	Pounds
1 oz =	0.06 lb	16 oz =	1.00 lb
2 oz =	0.12 lb	32 oz =	2.00 lb
3 oz =	0.19 lb	35 oz =	2.19 lb
4 oz =	0.25 lb	48 oz =	3.00 lb
5 oz =	0.31 lb	64 oz =	4.00 lb
6 oz =	0.38 lb	71 oz =	4.44 lb
7 oz =	0.44 lb	80 oz =	5.00 lb
8 oz =	0.50 lb	96 oz =	6.00 lb
9 oz =	0.56 lb	106 oz =	6.63 lb
10 oz =	0.62 lb	112 oz =	7.00 lb
11 oz =	0.69 lb	128 oz =	8.00 lb
12 oz =	0.75 lb	141 oz =	8.82 lb
13 oz =	0.81 lb	144 oz =	9.00 lb
14 oz =	0.88 lb	160 oz =	10.00 lb
15 oz =	0.94 lb		

Table 6
Decimal Equivalents of Commonly Used Fractions

$1/8 = 0.125$	$1/3 = 0.333$	$2/3 = 0.666$
$1/4 = 0.250$	$1/2 = 0.500$	$3/4 = 0.750$
$3/8 = 0.375$	$5/8 = 0.625$	$7/8 = 0.875$

Use *Table 7* to assist in rounding the decimal equivalent of a vegetables/fruits serving to the correct creditable volume towards the vegetables/fruits meal pattern component. The decimal equivalent is not fluid ounces but the fraction of a cup as determined by crediting calculations.

For example, a recipe analysis calculation determined that one portion of a recipe provides 0.68 cups of vegetables/fruits. Based on *Table 7*, you can count $5/8$ cup vegetable towards the vegetables/fruits meal pattern component since 0.68 is between 0.625 and 0.749. Keep in mind that two or more servings of *different* vegetables and/or fruits must be served to meet the vegetable/fruit requirement at lunch and/or supper.

Table 7
Converting Decimal Equivalents to the Nearest Portion of a Cup for Fruits and Vegetables

If decimal equivalent is:	the recipe contributes:
0.125 - .249	$1/8$ cup
.250 - .374	$1/4$ cup
.375 - .499	$3/8$ cup
.500 - .624	$1/2$ cup
.625 - .749	$5/8$ cup
.750 - .874	$3/4$ cup
.875 - .999	$7/8$ cup
1.000 - 1.124	1 cup

Using Table 8 to Calculate Fractions of a Unit

EXAMPLES:

Cups to Gallons: You want to convert 10-1/2 cups to the equal volume amount of gallons in decimal form.

1. Find the whole number unit in the left-hand column.

For this example, the whole number is “10”. Find “10” in the Number of Units column on the left of the table.

2. Follow this line across the table towards the right to the column headed “+1/2 unit.” Read the decimal number.

Going right from the number “10” and stopping under the heading “+1/2 unit,” the decimal number reads 0.66.

ANSWER: 10-1/2 cups is equal to 0.66 gallons.

Gallons to Cups: Your recipe calls for 0.53 gallons of an ingredient. You want to know the equal volume amount in cups.

1. Find .53 in the body of the table under the “fraction or part of the unit” columns.

For this example, .53 can be found under the “+1/2 unit” 9 rows down.

2. Follow this line across the table towards the left. Read the number in the “Number of Units” column.

The Number of Units corresponding to .53 (which is under the “+1/2 unit” column) reads “8.”

3. Combine the whole unit number from the “Number of Units” column with the fraction listed in the “Fraction or part of the unit” column corresponding to the .53 number.

The whole number = 8
The fraction of a number = +1/2
Combining these numbers = 8-1/2

ANSWER: 0.53 gallons is equal to 8-1/2 cups.

Table 8
Decimal Equivalents for Fractions of a Unit

Whole units are on the left. The fraction or part of the unit is to the right.

If the whole units are: **the decimal equivalents are part of:**
 ounces 1 pound
 tablespoons..... 1 cup
 cups..... 1 gallon

FRACTION OR PART OF THE UNIT						
NUMBER OF UNITS		+ 1/4 of unit	+ 1/3 of unit	+ 1/2 of unit	+ 2/3 of unit	+ 3/4 of unit
0	-----	0.02	0.02	0.03	0.04	0.05
1	0.06	.08	.08	.09	.10	.11
2	.12	.14	.15	.16	.17	.17
3	.19	.20	.21	.22	.23	.23
4	.25	.27	.27	.28	.29	.30
5	.31	.33	.33	.34	.35	.36
6	.38	.39	.40	.41	.42	.42
7	.44	.45	.46	.47	.48	.48
8	.50	.52	.52	.53	.54	.55
9	.56	.58	.58	.59	.60	.61
10	.62	.64	.65	.66	.67	.67
11	.69	.70	.71	.72	.73	.73
12	.75	.77	.77	.78	.79	.80
13	.81	.83	.83	.84	.85	.86
14	.88	.89	.90	.91	.92	.92
15	.94	.95	.96	.97	.98	.98
16	1.00	1.02	1.02	1.03	1.04	1.05

Metric Equivalents

Metric quantities are increasingly used for food processing, packaging, and specification writing. The following four tables will help you become familiar with the relationship between metric units (Tables 9, 10 and 11) and customary units (Table 12).

Table 9 is a guide to metric conversions showing, for example, how to change ounces to grams by multiplying by 28.35. *Table 10* shows metric equivalents by weight. *Table 11* shows metric equivalents by volume. *Table 12* shows customary units for volume.

Note: For Tables 11 and 12, keep in mind that volume is measured in fluid ounces and liters.

Table 9
A Guide to Metric Conversions

<i>To change</i>	<i>To</i>	<i>Multiply by</i>
ounces (oz)	grams (g)	28.35
pounds (lb)	grams (g)	453.6
pounds (lb)	kilograms (kg)	0.4536
teaspoons (tsp)	milliliters (mL)	4.93
tablespoons (Tbsp)	milliliters (mL)	14.79
fluid ounces (fl oz)	milliliters (mL)	29.57
cups (c)	liters (L)	0.236
pints (pt)	liters (L)	0.473
quarts (qt)	liters (L)	0.946
gallons (gal)	liters (L)	3.785

Table 10
Metric Equivalents by Weight

<i>Customary Unit (avoirdupois)</i>	<i>Metric Unit</i>
<i>Ounces (oz)</i>	<i>Grams (g)</i>
1 oz	28.35 g
4 oz	113.4 g
8 oz	226.8 g
16 oz	453.6g
<i>Pounds (lb)</i>	<i>Grams (g)</i>
1 lb	453.6 g
2 lb	907.2 g
<i>Pounds (lb)</i>	<i>Kilograms (kg)</i>
2.2 lb	1 kg (1000 g)



Table 11
Metric Equivalents by Volume

<i>Customary Unit (fluid ounces)</i>	<i>Metric Unit</i>
1 cup (8 fl oz)	236.59 milliliters (mL)
1 quart (32 fl oz)	946.36 milliliters (mL)
1.5 quarts (48 fl oz)	1.42 liter (L)
33.818 fl oz.....	1.0 liter (L)

Table 12
A Guide to Volume Equivalents for Liquids

1 tablespoon	= 3 teaspoons	= 0.5 fluid ounces
1/8 cup	= 2 tablespoons	= 1 fluid ounce
1/4 cup	= 4 tablespoons	= 2 fluid ounces
1/3 cup	= 5-1/3 tablespoons	= 2.65 fluid ounces
3/8 cup	= 6 tablespoons	= 3 fluid ounces
1/2 cup	= 8 tablespoons	= 4 fluid ounces
5/8 cup	= 10 tablespoons	= 5 fluid ounces
2/3 cup	= 10-2/3 tablespoons	= 5.3 fluid ounces
3/4 cup	= 12 tablespoons	= 6 fluid ounces
7/8 cup	= 14 tablespoons	= 7 fluid ounces
1 cup	= 16 tablespoons	= 8 fluid ounces
1/2 pint	= 1 cup	= 8 fluid ounces
1 pint	= 2 cups	= 16 fluid ounces
1 quart	= 2 pints	= 32 fluid ounces
1 gallon	= 4 quarts	= 128 fluid ounces
1 peck	= 8 quarts (dry)	
1 bushel	= 4 pecks	