

The US kitchen conversion chart: teaspoons to gallons, with metric and UK equivalents

A gallon is 4 quarts, a quart is 2 pints, a pint is 2 cups, a cup is 8 fluid ounces, a fluid ounce is 2 tablespoons, a tablespoon is 3 teaspoons.

Big unit to small unit: multiply. Small to big: divide. The millilitre values are the US customary ones from NIST SP 811 Appendix B.

Unit	Equals	Fluid ounces	Cups	Millilitres
1 gallon	4 quarts = 8 pints	128 fl oz	16 cups	3,785 mL
1 quart	2 pints = 4 cups	32 fl oz	4 cups	946 mL
1 pint	2 cups	16 fl oz	2 cups	473 mL
1 cup	16 tablespoons	8 fl oz	1 cup	237 mL (240 on food labels)
1 fluid ounce	2 tablespoons	1 fl oz	1/8 cup	29.6 mL
1 tablespoon	3 teaspoons	1/2 fl oz	1/16 cup	14.8 mL (15 on labels)
1 teaspoon		1/6 fl oz	1/48 cup	4.9 mL (5 on labels)

The short answers

Cups in a quart	4	Quarts in a gallon	4	Fluid ounces in a quart	32
Pints in a quart	2	Cups in a gallon	16	Fluid ounces in a cup	8
Cups in a pint	2	Pints in a gallon	8	Tablespoons in a cup	16
5 quarts in cups	20	A quart in litres	0.946	Teaspoons in a tablespoon	3

Gallon Man: the picture that makes it stick

Draw a big G. Inside it draw four Qs. Inside each Q draw two Ps. Inside each P draw two Cs. Count: 4 quarts in the gallon, 8 pints, 16 cups.

Any cups-pints-quarts-gallons question is answered by counting letters.

The UK imperial measures are bigger, and other countries' cups differ

Unit	US customary	UK imperial
Gallon	3.785 L	4.546 L (exact)
Quart	0.946 L = 32 US fl oz	1.137 L = 40 imperial fl oz
Pint	473 mL = 16 US fl oz	568 mL = 20 imperial fl oz
Fluid ounce	29.57 mL	28.41 mL
Cup	237 mL (8 US fl oz)	no legal cup: recipes use 250 mL
Dry quart (berries, grain, US only)	1.101 L	

Australia and New Zealand: the metric cup is 250 mL (Australian tablespoon 20 mL, NZ 15 mL). India: 200 or 250 mL cups, more often grams.

To move a recipe between countries, go through millilitres. Fluid ounces measure volume; the ounces on a kitchen scale (28.35 g) measure mass: a cup of water is about 8.3 oz by weight, a cup of flour about 4.25 oz.

From

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Converting in your head, and a practice set

The moves

- [] Quarts to cups: $\times 4$ (5 quarts = 20 cups; 1.5 quarts = 6 cups). Cups to quarts: $\div 4$ (10 cups = 2.5 quarts)
- [] Quarts to gallons: $\div 4$ (10 quarts = 2.5 gallons). Gallons to quarts: $\times 4$ (2.5 gallons = 10 quarts)
- [] Quarts to fluid ounces: $\times 32$ (2 quarts = 64 fl oz). Fluid ounces to cups: $\div 8$ (12 fl oz = 1.5 cups)
- [] Cups to tablespoons: $\times 16$ ($\frac{1}{4}$ cup = 4 tbsp; $\frac{1}{3}$ cup = 5 tbsp + 1 tsp). Tablespoons to teaspoons: $\times 3$
- [] Cups to millilitres: $\times 237$ (about $\times 240$). Litres to quarts: $\times 1.057$ (a 2 L bottle is 2.1 quarts, about 8.5 cups)
- [] Check every answer: a bigger unit means a smaller number (20 cups = 5 quarts = 1.25 gallons)

Worked example

A punch recipe needs 3 quarts of juice; the bottle is 64 fl oz. 3 quarts $\times 32 = 96$ fl oz needed. $96 - 64 = 32$ fl oz short, which is 1 quart or 4 cups.

Practice

1. How many cups are in 3 quarts?
2. A 2-gallon drinks cooler holds how many quarts? How many cups?
3. A recipe needs 1 pint of cream. You have a 1-quart carton. What fraction of the carton is left after the recipe?
4. 48 fluid ounces of broth is how many cups? How many quarts?
5. Which is more: 5 quarts, or 1 gallon plus 3 cups?
6. A fish tank holds 10 gallons. How many quarts is that, and roughly how many litres?
7. A cake needs $\frac{3}{4}$ cup of milk. How many tablespoons is that? How many fluid ounces?
8. A 1.5-litre bottle of water is about how many cups?

Answers

1. 12 cups. 2. 8 quarts; 32 cups. 3. A quart is 2 pints, so half is left. 4. 6 cups; 1.5 quarts. 5. 5 quarts = 20 cups; 1 gallon + 3 cups = 19 cups; 5 quarts is more. 6. 40 quarts; about 38 litres (10×3.785). 7. 12 tablespoons; 6 fl oz. 8. About 6.3 cups ($1,500 / 237$); about 6 cups using 250 mL metric cups.

Your own conversions

Recipe amount and unit:

Target unit:

Multiply or divide, by what:

Answer:

Check (bigger unit, smaller number?):
