

# **Kitchen Math**

When following a recipe, use only the imperial or metric measures, not a combination; the amounts are not exact equivalents. In many dishes such as casseroles and soups this is not a problem. However, it is very important for baking and sauces where **a small change can alter a recipe significantly**.

Measures		
	Imperial	Metric
Spoons	1/8 tsp	0.5 mL
	1/4 tsp	1 mL
	1/2 tsp	2 mL
	3/4 tsp	3 mL
	1 tsp	5 mL
	1 tbsp	15 mL
	2 tbsp	25 mL
Cups	1/4 cup	50 mL
	1/3 cup	75 mL
	1/2 cup	125 mL
	2/3 cup	150 mL
	3/4 cup	175 mL
	1 cup	250 mL
:	1 1/4 cups	300 mL
:	1 1/2 cups	375 mL
:	1 3/4 cups	425 mL
	2 cups	500 mL
	4 cups	1 L

Looking at L	ength_		
1	inch	2.54	centimetres
1	foot	30.5	centimetres
3.28	feet	1	metre
1	mile	1.6	kilometers
0.62	miles	1	kilometer

<b>Looking at V</b>	<u>Veight</u>			
1	OZ	28	g	
1	lb	454	g	
2.2	lb	1	kg	
1	kg	1000	g	

## **Measuring Butter and Hard Margarine**

1 lb (454 g)	=	2 cups (500 mL)
1/4 lb (125 g)	=	1/2 cup (125 mL)

Bakeware – Sizing it Up			
Inside Top Measurements	;	Volu	ıme
<b>Rectangle</b> 7x11 inch (18x28cm) 9x13 inch (23x33cm)		cups cups	(3 L) (3.5 L)
<b>Square</b> 8x8 inch (20x20 cm) 9x9 inch (23x23 cm)		cups cups	(2 L) (2.5 L)
<b>Round</b> 8 inch (20 cm) 9 inch (23 cm)		•	(1.2 L) (1.5 L)
<b>Tube</b> 9 inch (23cm) 10 inch (25cm)		cups cups	
Springform Pan 9 inch (23 cm) 10 inch (27 cm)		cups cups	(2.5 L) (3 L)
Rimmed Baking Sheet/Jel 10x15 inch (25x38 cm)	•		(2 L)
Loaf Pan 8x4 inch (20x10cm) 9x5 inch (23x13cm)		cups cups	(1.5 L) (2 L)
Pie Plate 9 inch (23 cm) 9 inch deep (23 cm) 9 1/2 inch (24 cm)	5 1/2	cups	(1.25 L) (1.40 L) (1.70 L)

## **Looking at Volume**

Many old recipes call for volumes in pints, quarts or gallons. Here are the approximate equivalents in cups.

1 pint	=	2 cups
1 quart	=	4 cups
1 gallon	=	16 cuns

#### **Oven Temperatures**

Description	°F	°C	Gas Mark
	200°	100°	
Very Slow	250°	120°	1/2
	275°	140°	1
Slow	300°	150°	2
	325°	160°	3
Moderate	350°	180°	4
	375 <b>°</b>	190°	5
Hot	400°	200°	6
	425°	220°	7
Very Hot	450°	230°	8
	475°	240°	9
Extremely Hot	500°	260°	

#### **Candy Creations**

Candy making temperatures are based at sea level. Adjustments may need to be made at different altitudes.

Thread Stage	230 - 234°F (110 - 112°C)
Soft-ball Stage	234 - 240°F (112 - 115°C)
Firm-ball Stage	244 - 249°F (118 - 120°C)
Hard-ball Stage	250 - 266°F (121 - 130°C)
Soft-crack Stage	270 - 290°F (132 - 143°C)
Hard-crack Stage	300 - 310°F (149 - 154°C)

## **Temperature Conversion**

To convert from Fahrenheit to Celsius:

$$^{\circ}F - 32 \times 5 \div 9 = ^{\circ}C$$

To convert from Celsius to Fahrenheit:

 $^{\circ}$ C x 9 ÷ 5 + 32 =  $^{\circ}$ F

#### **Keep It Cold**

Refrigerator temperature must be 34 - 40°F (1 - 4°C).

Freezer temperature must be colder than 0°F (-18°C).

#### **Temperature of Boiling Water**

At sea level, water boils at 212°F (100°C). At higher elevations, such as those found in Alberta, water may boil at lower temperatures.

## **The Danger Zone**

Keep food very hot or very cold for food safety. The **Danger Zone** for rapid bacterial growth is 40 - 140°F (4 - 60°C).

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#### **Cooked to Perfection**

Cook to the following internal temperatures.

Beef/Lamb/Veal (roasts, steaks)		
Rare	140°F (60°C)	
Medium	160°F (71°C)	
Well done	170°F (77°C)	

### Bison/Buffalo (roasts, steaks)

Rare	135°F (57°C)
Medium rare	145°F (62°C)
Do not cook beyond	155°F (68°C)

#### Pork (roasts, chops)

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Medium	160°F (71°C)
Well done	170°F (77°C)
Ham (ready-to-serve)	140°F (60°C)
(cook before serving)	160°F (71°C)

**Chicken/Turkey** (whole) 180 - 185°F (82 - 85°C) **Chicken/Turkey** (pieces) 170 - 175°F (77 - 80°C)

### **Ground Beef or Poultry**

Ground Beef	160°F (71°C)
Ground Poultry	175°F (80°C)

Approximate Can Conversions		
Imperial	Metric	
5 1/2 oz	156 mL	
7 1/2 oz	213 mL	
8 oz	227 mL	
10 oz	284 mL	
12 oz	341 mL	
14 oz	398 mL	
16 oz	455 mL	
19 oz	540 mL	
28 oz	796 mL	
40 oz	1.14 L	
48 oz	1.36 L	

#### What the Abbreviations Stand For

Length:	mm	millimetre
	cm	centimeter
	m	meter
Temperature:	°C	Celsius
	°F	Fahrenheit
Volume:	mL	millilitre
	L	litre
Weight:	g	gram
	kg	kilogram
	OZ	ounce
	lb	pound