



Culinary Math

Student Workbook



Name: _____

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Culinary Math: Kitchen Measuring Tools

Kitchen Measuring Tools

Converting Units of Measure
From the Metric System to Imperial System

Pro Tip:

If you are doing both conversions as well as changing the overall quantity of the recipe, make sure to carefully do the unit conversions before you do the overall quantity adjustment.

Use a conversion chart to change each ingredient from the metric system to the imperial system.

Ingredient	Grams	Imperial
All-purpose flour	120	1 cup
Baking powder	4	1 tsp
Sugar	198	1 cup
Butter	113	8 tbsp or 1 stick

Did you know?

Most recipes in the United States measure ingredients by volume. In other parts of the world, it's more common for ingredients to be listed by metric weight. For example, a recipe developed in a U.S. test kitchen might call for 3 tablespoons of butter, while a similar recipe from Europe might list this quantity as 40 grams. For this reason, it's a good idea for anyone who does a lot of cooking to own a good metric kitchen scale to make use of any recipe they might come across.

Culinary Math: Kitchen Measuring Tools

Application Activity: Kitchen Measuring Tools

Measuring Techniques for Liquids and Dry Ingredients

Method 1

- 1) Fill a liquid measuring cup to the 1-cup mark with water.
- 2) Place the cup on a flat surface and position yourself at eye level with the water before attempting to read the water level.
- 3) Zero out the scale to eliminate the tare weight.
- 4) Weigh the water on the scale and record the weight in the table in ounces and grams.

Method 2

- 1) Fill a 1-cup dry measure cup with flour.
- 2) Overfill the cup and level it with a butter knife or other straight edge.
- 3) Zero out the scale to eliminate the tare weight.
- 4) Weigh the flour on the scale and record the weight in the table in ounces and grams.

Table for Evaluation of 1 Cup Liquid Weight and 1 Cup Dry Weight

<u>Method</u>	<u>Ounces</u>	<u>Grams</u>
1		
2		
Difference		

Question:

Was there a difference in measurement between the two methods and why?

Culinary Math: Kitchen Measuring Tools

Converting Recipe Yield

Directions:

Convert the recipe below.

Brownies

1/2 cup butter
1 cup white sugar
2 eggs
1 teaspoon vanilla extract
1/3 cup unsweetened cocoa powder
1/2 cup all-purpose flour
1/4 teaspoon salt
1/4 teaspoon baking powder



Answer

Halve the recipe

butter
white sugar
egg(s)
vanilla extract
unsweetened cocoa powder
all-purpose flour
teaspoon salt
teaspoon baking powder

Double the recipe

butter
white sugar
egg(s)
vanilla extract
unsweetened cocoa powder
all-purpose flour
teaspoon salt
teaspoon baking powder

Culinary Math: Kitchen Measuring Tools

Converting Recipe Yield

Directions:

Convert the recipe below.

Easy Party Punch

4 cups cranberry juice
2 cups pineapple juice
1/2 can frozen lemonade concentrate or limeade concentrate
4 cups ginger ale
3 cups ice cubes
2 lemon slices
15 fresh berries for garnish



Answer

Convert the recipe to 1/3

cranberry juice
pineapple juice
frozen lemonade or limeade concentrate
ginger ale
ice cubes
lemon slides
fresh berries

Times the recipe by 1.5

cranberry juice
pineapple juice
frozen lemonade or limeade concentrate
ginger ale
ice cubes
lemon slides
fresh berries