

Measuring Up Metric

Chocolate Chip Cookies for a Crowd!



These are identical recipes for chocolate chip cookies, but one lists the ingredients using customary U.S. measurements and the other uses metric measurements. Your work is to **scale** these recipes that make 24 cookies to recipes that yield 240 cookies! That's a **factor** of 10! (Your cookies are VERY popular.) After you are finished, consider the questions below.

CHOCOLATE CHIP COOKIES

yields 24

- 5 cups ←
- 1/2 cup butter, softened
 - 1/2 cup white sugar
 - 1/2 cup packed brown sugar
 - 1 egg
 - 1 teaspoon vanilla extract
 - 1-1/2 cups all-purpose flour
 - 1/2 teaspoon baking soda
 - 1 teaspoon hot water
 - 1/4 teaspoon salt
 - 1 cup semisweet chocolate chips
 - 2/3 cup chopped walnuts

CHOCOLATE CHIP COOKIES

yields 24

- 1 kg ←
- 115 g butter, softened
 - 100 g white sugar
 - 110 g packed brown sugar
 - 1 egg
 - 5 ml vanilla extract
 - 190 g all-purpose flour
 - 2 g baking soda
 - 5 ml hot water
 - 2 g salt
 - 170 g semisweet chocolate chips
 - 60 g chopped walnuts

Did you find it easier to **convert** the U.S. units or the metric units? Why?



Discuss where the two systems differ other than quantities. For example, teaspoons are used for both water and salt in the U.S. system, but in metric a volume measurement is used for water and a mass measurement is used for salt. Is one better? Would you need a **scale** for both recipes?