

MATH ACTIVITIES IN NUTRITION

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DRINK HEALTHY DRINK LIGHT

Sometimes you need to **CONVERT ONE MEASUREMENT UNIT TO ANOTHER**.
Use the equivalence tables below to know which number to divide.

EXAMPLE

A 32 oz. thick chocolate shake has 40 teaspoons of sugar. How many tablespoons and cups does this make? What would be the most efficient way to measure out this amount of sugar?

- I can see from the table that 3 tsp. = 1 Tbsp., so I will divide 40 by 3: $40 \div 3 = 13 \frac{1}{3}$ Tbsp. The most efficient way to measure this amount is 13 Tbsp. plus 1 tsp.
- $13 \frac{1}{3}$ won't divide evenly, but I know there are 4 Tbsp. in $\frac{1}{4}$ c., 8 Tbsp. in $\frac{1}{2}$ c., and therefore 12 Tbsp. in $\frac{3}{4}$ c. That leaves $1 \frac{1}{3}$ Tbsp.
- The most efficient way to measure this amount is $\frac{3}{4}$ c. plus 1 Tbsp. plus 1 tsp.



YOUR TURN

A 20 oz. sugar-added fruit drink has 18 teaspoons of sugar.

How many tablespoons and cups does this make?

What would be the most efficient way to measure out this amount of sugar?

$18 \div 3 = \underline{\hspace{1cm}}$ Tbsp. $\div 16 = \underline{\hspace{1cm}}$ c. plus $\underline{\hspace{1cm}}$ Tbsp. OR $\underline{\hspace{1cm}}$ c. plus $\underline{\hspace{1cm}}$ c.

Most efficient measurement: $\underline{\hspace{1cm}}$ c. plus $\underline{\hspace{1cm}}$ c.

ANSWER 6; $\frac{1}{4}$; 2; $\frac{1}{4}$; $\frac{1}{8}$; $\frac{1}{4}$; $\frac{1}{8}$

CALCULATE THE FOLLOWING

How many tablespoons and cups does each sugar amount make?

What would be the most efficient way to measure out this amount of sugar?

1

A 32 oz. creamy orange slushy has 24 tsp. of sugar.

24 tsp. = $\underline{\hspace{1cm}}$ Tbsp. = $\underline{\hspace{1cm}}$ c.

Most Efficient Measurement: $\underline{\hspace{1cm}}$

2

A 44 oz. cola-flavored soft drink has 32 tsp. of sugar.

32 tsp. = $\underline{\hspace{1cm}}$ Tbsp. OR $\underline{\hspace{1cm}}$ Tbsp. plus $\underline{\hspace{1cm}}$ tsp.

= $\underline{\hspace{1cm}}$ c. plus $\underline{\hspace{1cm}}$ Tbsp.

OR $\underline{\hspace{1cm}}$ plus $\underline{\hspace{1cm}}$ Tbsp. plus $\underline{\hspace{1cm}}$ tsp.

Most Efficient Measurement: $\underline{\hspace{1cm}}$

3

A 20 oz. sugar-added power water has 8 tsp. of sugar.

8 tsp. = $\underline{\hspace{1cm}}$ Tbsp. OR $\underline{\hspace{1cm}}$ Tbsp. plus $\underline{\hspace{1cm}}$ tsp.

= $\underline{\hspace{1cm}}$ c. plus $\underline{\hspace{1cm}}$ Tbsp.

Most Efficient Measurement: $\underline{\hspace{1cm}}$

4

A 24 oz. energy drink has 20 tsp. of sugar.

20 tsp. = $\underline{\hspace{1cm}}$ Tbsp. OR $\underline{\hspace{1cm}}$ Tbsp. plus $\underline{\hspace{1cm}}$ tsp.

= $\underline{\hspace{1cm}}$ c. plus $\underline{\hspace{1cm}}$ Tbsp.

Most Efficient Measurement: $\underline{\hspace{1cm}}$

ABBREVIATIONS

TEASPOON	TSP.
TABLESPOON	TBSP.
CUP	C.
FLUID OUNCES	FL. OZ.
PINT	PT.
QUART	QT.

DRY OR LIQUID INGREDIENTS

3 TSP.	= 1 TBSP.
4 TBSP.	= 8 FL. OZ.
8 TBSP.	= $\frac{1}{2}$ C.
16 TBSP.	= 1 C.

FLUID OUNCES

2 TBSP.	= 1 FL. OZ.
1 C.	= 8 FL. OZ.
1 PT.	= 16 FL. OZ.
1 QT.	= 32 FL. OZ.

CRUNCH TIME

name _____

date _____

Sometimes you want to make a different amount of food than what the recipe yields. Multiply or divide by a **FRACTION** to **CONVERT** the recipe to a larger or smaller number of servings.

EXAMPLE

A strawberry lemonade recipe calls for $1\frac{1}{2}$ pints of strawberries and makes 4 servings. If you want to make 3 servings, what quantity of strawberries do you need?

ANSWER

The recipe conversion factor is $\frac{3}{4}$. Convert $\frac{3}{2}$ pints by multiplying by $\frac{3}{4}$.

$$\frac{3}{4} \times \frac{3}{2} = \frac{9}{8} = 1\frac{1}{8} \text{ pints or } 2\frac{1}{4} \text{ cups.}$$

You need $1\frac{1}{8}$ pints or $2\frac{1}{4}$ cups of strawberries to make 3 servings.



YOUR TURN

You want to make homemade peanut butter granola bars to share with your 15 teammates and 3 coaches after Saturday's soccer game. Your recipe serves 24 people. You want to reduce the recipe to serve 18. How much of each ingredient do you need? What is the best method of measurement for each ingredient?

(You may need to refer to the Measurement Equivalents sheet.)

RECIPE FOR 24	RECIPE FOR 18	METHOD OF MEASUREMENT
$\frac{1}{2}$ cup peanut butter	_____	_____
$3\frac{1}{2}$ cups oats	_____	_____
$\frac{1}{4}$ cup brown sugar	_____	_____
$\frac{1}{3}$ cup carob chips	_____	_____
$\frac{1}{3}$ cup honey	_____	_____
$\frac{2}{3}$ cup raisins	_____	_____
1 egg	_____	_____
1 Tbsp vegetable oil	_____	_____
1 tsp vanilla	_____	_____
$\frac{1}{2}$ tsp salt	_____	_____

If you were to make this recipe, who might you make it for? _____

How many people is that? _____

How would you convert the recipe to serve that number of people? _____
