

Step 4 Distribute Conversion Practice Problems. Allow students to work independently, giving assistance where needed.

Step 5 Check work and provide further instruction if needed.

Assessment/Evidence:

Student will successfully complete Conversion Practice Problems.

Teacher Reflection:

This lesson was created by Middletown ABLE.

Converting Fluid Ounces to Milliliters (Cubic Centimeters)

As a nurse, you may be required to keep track of a patient's fluid intake. Since most products in the United States are sold by the **fluid ounce**, and nursing documentation requires charting fluid intake by **milliliters** (mLs), also known as cubic centimeters (CCs), you will need to convert liquid measures from fluid ounces to their metric equivalents. The chart below gives you equivalents for commonly used fluid measurements.

US liquid Measurements and Metric Fluid Measures

U.S. Liquid	Metric
1 drop	= .06 milliliter (ml)
15 drops	= 1 milliliter (ml)
1 teaspoon (tsp)	= 5 milliliters (ml)
1 tablespoon (Tbsp)	= 15 milliliters (ml)
1 ounce (oz)	= 30 milliliters (ml)
1 cup (c)	= 240 milliliters (ml)
1 pint	= 480 milliliters (ml)
1 quart	= 960 milliliters (ml)
4 cups (c)	= 960 milliliters (ml)

Sample conversions:

If you know the approximate number of ounces a patient has had, simply multiply by 30 to get the number of mLs (CCs) a patient has taken in.

If a patient drinks an 8-ounce beverage (one cup) he has ingested 240 milliliters or cubic centimeters.

If a patient has had $\frac{2}{3}$ of a 20-ounce water bottle, she has had $\frac{2}{3} \times 20$ ounces, or about 13.3 ounces. One ounce is 30 milliliters, so multiply 13.3 times 30. The patient has had 399, or about 400 ounces.

Conversion Practice Problems

The following word problems give practice in converting a patient's fluid intake from ounces to milliliters (mLs), also known as cubic centimeters (CCs).

1. Lisa drank a 4-ounce apple juice. How many milliliters did she drink?
2. Joey drank a half-pint carton of chocolate milk. How many mLs did he drink?
3. Mr. Ramirez drank about three fourths of his 20-ounce water bottle. What was his fluid intake in cubic centimeters?
4. With his lunch, Stephen had half a 10 ounce can of broth and a 12-ounce can of Coca-Cola. How many CCs did he drink?
5. At breakfast, Mrs. Phelps used about two thirds of her 8-ounce milk on her cereal. She drank all of her 4-ounce cranberry juice and about half her 6-ounce cup of tea. How many CCs of liquid did she have?
6. Mrs. Gray drank about half an 8-ounce bottle of Ensure and a couple of tablespoons of water. In milliliters, what was her fluid intake?
7. At supper, Mr. Geiger had a half a cup of broth, a 6-ounce coffee, 4 ounces of grape juice, and one fourth of a 20-ounce water bottle. How many cubic centimeters of liquid did he take in?

Conversion Practice Problems – Answer Key

The following word problems give practice in converting a patient's fluid intake from ounces to milliliters (mLs), also known as cubic centimeters (CCs).

1. Lisa drank a 4-ounce apple juice. How many milliliters did she drink? **120 milliliters**
2. Joey drank a half-pint carton of chocolate milk. How many mLs did he drink? **240 mLs**
3. Mr. Ramirez drank about three fourths of his 20-ounce water bottle. What was his fluid intake in cubic centimeters? **About 450 cubic centimeters**
4. With his lunch, Stephen had half a 10-ounce can of broth and a 12-ounce can of Coca-Cola. How many CCs did he drink? **510 CCs**
5. At breakfast, Mrs. Phelps used about two thirds of her 8-ounce milk on her cereal. She drank all of her 4-ounce cranberry juice and about half her 6-ounce cup of tea. How many CCs of liquid did she have? **About 290 CCs**
6. Mrs. Gray drank about half an 8-ounce bottle of Ensure and a couple of tablespoons of water. In milliliters, what was her fluid intake? **About 150 milliliters**
7. At supper, Mr. Geiger had a half a cup of broth, a 6-ounce coffee, 4 ounces of grape juice, and one fourth of a 20-ounce water bottle. How many cubic centimeters of liquid did he take in?
690 centimeters