Name _____   Date _____

Converting Units of Capacity Problems - Guided Lesson Explanation

Let's start with what we know already that will help us solve all the problems:

1 gallon = 4 quarts = 8 pints = 16 cups

We can use this standard conversion to create proportions that will help us solve all the problems.

Explanation#1

Step 1) First we have to see what is being asked.

"1 gallon = _____ quarts."

Step 2) As we know:

1 gal = 4 quarts

So, the answer is 4 quarts.

Explanation#2

Step 1) We know that in 4 quarts there are 8 pints. Let's make a proportion:

$\frac{4 \text{ quarts}}{1 \text{ quart}} = \frac{8 \text{ pints}}{x \text{ pints}}$ $4x = 8$ $x = 2$

Step 2) 1 quart = 2 pints

Explanation#3

Step 1) We know that 4 quarts = 16 cups   Time to make another proportion:

$\frac{4 \text{ quarts}}{1 \text{ quart}} = \frac{16 \text{ cups}}{x \text{ cups}}$ $4x = 16$ $x = 4$

Step 2) As we know:

1 quart = 4 cups.