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Objective:	To convert a measurement from one unit to another unit.
Measurement:	Volume
1st: **Given Unit:**	Customary unit (Fluid Ounce)
To Convert to:	Metric unit (Milliliters)
2nd: **Given Unit:**	Metric unit (Milliliters)
To convert to:	Customary unit (Fluid Ounce)
Container Used:	Bubble bath soap bottle (Please see bottom.)

First Conversion: Convert $24\ fl.oz$ to mL

From the Given Tables:

$$1\ L\ =\ 0.26417205\ gal$$

$$1\ gal = 4\ qt$$

$$1\ qt = 4\ cups$$

$$1\ cup = 8\ fl.oz$$

The first conversion will be to Fluid Ounces to Liters, then to Milliliters. We will use the unity fraction method.

$$24\ fl.oz\ * \frac{L}{gal} * \frac{gal}{qt} * \frac{qt}{cup} * \frac{cup}{fl.oz}$$

$$24\ fl.oz\ * \frac{1\ L}{0.26417205\ gal} * \frac{1\ gal}{4\ qt} * \frac{1\ qt}{4\ cup} * \frac{1\ cup}{8\ fl.oz}$$

$$= \frac{24 * 1 * 1 * 1 * 1}{0.26417205\ * 4 * 4 * 8}$$

$$= \frac{24}{33.8140224}$$

$$= 0.7097647158\ L$$

Now convert to Milliliters with the unity fraction method.

$$0.7097647158\ L\ *\ \frac{mL}{L}$$

$$= 0.7097647158\ L\ *\ \frac{1\ mL}{10^{-3}\ L}$$

$$= 0.7097647158\ L\ *\ \frac{1mL}{0.001\ L}$$

$$= 709.7647158\ mL$$

Rounding to the nearest whole number:

$$\approx 710\ mL$$

This confirms the quantity in mL in the bubble bath soap container.

Second Conversion: Convert $710\ mL$ to $fl.oz$

From the Given Tables:

$$1\ L = 0.26417205\ gal$$

$$1\ gal = 128\ fl.oz$$

$$1\ mL\ =\ 10^{-3}\ L$$

The second conversion will be Milliliters to Fluid Ounces. We will use the unity fraction method.

$$mL\ * \frac{L}{mL} * \frac{gal}{L} * \frac{fl.oz}{gal}$$

$$= 710\ mL\ *\ \frac{10^{-3}\ L}{1\ mL} * \frac{0.26417205\ gal}{1\ L} * \frac{128\ fl.oz}{1\ gal}$$

$$= \frac{710 * 0.001 * 0.26417205 * 128}{1 * 1 * 1}$$

$$= \frac{24.007955904}{1}$$

$$= 24.007955904\ fl.oz$$

Rounding to the nearest whole number:

$$\approx 24\ fl.oz$$

This confirms that the conversion for the container from mL to $fl.oz$ was done correctly.