Lesson 4.7 Convert Between Systems

Objective: To convert units of measure between the customary and metric system.

Pg. 320 Cut out.

Customary and Metric Relationships			
Type of Measure	**Customary**	⟶	**Metric**
Length	1 inch (in.)	≈	2.54 centimeters (cm)
	1 foot (ft)	≈	0.30 meter (m)
	1 yard (yd)	≈	0.91 meter (m)
	1 mile (mi)	≈	1.61 kilometers (km)
Weight/Mass	1 pound (lb)	≈	453.6 grams (g)
	1 pound (lb)	≈	0.4536 kilogram (kg)
	1 ton (T)	≈	907.2 kilograms (kg)
Capacity	1 cup (c)	≈	236.59 milliliters (mL)
	1 pint (pt)	≈	473.18 milliliters (mL)
	1 quart (qt)	≈	946.35 milliliters (mL)
	1 gallon (gal)	≈	3.79 liters (L)

Ex.1 Convert 17.22 inches to centimeters. Round to the nearest hundredth.

$$\frac{17.22\ \text{in}}{1} \times \frac{2.54\ \text{cm}}{1\ \text{in}} = 17.22 \times 2.54 = 43.7388$$

$\approx 43.74\ \text{cm}$

Ex.2 Convert 828.5 milliliters to cups. Round to the nearest hundredth.

$$\frac{828.5\ \text{mL}}{1} \times \frac{1\ \text{c}}{236.59\ \text{mL}} = \frac{828.5\ \text{c}}{236.59} = 3.5018$$

Divide to get answer.

$\approx 3.50\ \text{cups}$

Ex. 3 An olympic-size pool is 50 meters long. About how many feet long is the pool?

$$\frac{50\text{m}}{1} \times \frac{1 \text{ ft}}{0.30 \text{ m}} = \frac{50 \text{ ft}}{0.30}$$

$$\approx 166.66666 \approx \boxed{166.67 \text{ ft}}$$

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