

NAME _____

Module 12 Attributes and Tools
Lesson 2 Same System Conversions

Challenge Problems

12.2

Set 1

1

Aaron bought three, 2 L bottles of fruit punch for the school picnic. How many 1 cup servings are available? (Hint: 237 mL are in 1 c.)

2

Denver's father is 2 meters tall, and Clint's father is 6 feet tall. Who is taller? (Hint: 2.54 centimeters are in 1 in.)

Possible Answers

Set 1

1.

$$\begin{aligned} 6 \text{ L} &= 6,000 \text{ mL} \\ &\quad \frac{1 \text{ c}}{237 \text{ mL}} \\ \frac{1}{237} \frac{\text{c}}{\text{mL}} \times 6,000 \text{ mL} &= \frac{6,000}{237} \text{ c} \\ &\approx 25.3 \text{ c} \end{aligned}$$

Twenty-five 1 cup servings are in three 2 L bottles.

2.

$$\begin{aligned} \text{Denver's father: } 2 \text{ m} &= 200 \text{ cm} \\ \text{Clint's father: } 12 \frac{\text{in.}}{\text{ft}} \times 6 \text{ ft} &= 72 \text{ in.} \end{aligned}$$

$$2.54 \frac{\text{cm}}{\text{in.}} \times 72 \text{ in.} = 182.88 \text{ cm}$$

$$182.88 \text{ cm} < 200 \text{ cm}$$

Denver's father is taller.