

Apply knowledge of unit conversions in order to solve multi-step problems involving liquid volume in the metric system using visual models and equations.

Name:

Practice Set

A

Date:

1 liter = 1,000 milliliters

1. Shyan's barrel contained 3,775 milliliters of paint. She poured in 1 liter 425 milliliters more. The first day Shyan used 2 liters of the paint. After the second day, there were 1,769 milliliters of paint remaining in the barrel. How much paint did Shyan use on the second day? Justify your answer with equations and a visual model.

2. Jose's vase can hold up to 3 liters of water. He poured 1 liter 299 milliliters of water into the empty vase. Then he added 398 milliliters. If he adds one more liter, will the vase overflow? Why or why not? Justify your answer with equations and a visual model.

Apply knowledge of unit conversions in order to solve multi-step problems involving liquid volume in metric system using visual models and equations.

Answer Key

Practice Set

A

1. Shyan's barrel contained 3,775 milliliters of paint. She poured in 1 liter 425 milliliters more. The first day Shyan used 2 liters of the paint. After the second day, there were 1,769 milliliters of paint remaining in the barrel. How much paint did Shyan use on the second day? Justify your answer with equations and a visual model.

Amount of paint at end of first day = F

$$3,775 \text{ mL} + 1,425 \text{ mL} - 2,000 = F$$

$$3,200 \text{ mL} = F$$

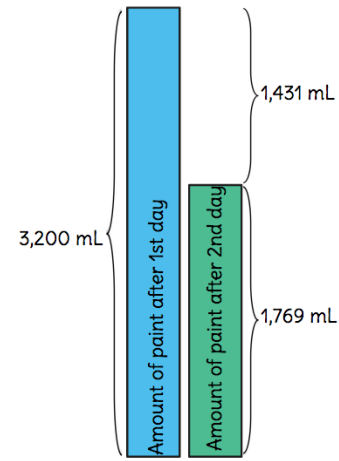
Paint used on the second day = S

$$3,200 \text{ mL} - S = 1,769$$

$$3,200 \text{ mL} - 1,769 \text{ mL} = S$$

$$1,431 \text{ mL} = S$$

Shyan used 1,431 milliliters of paint the second day.



2. Jose's vase can hold up to 3 liters of water. He poured 1 liter 299 milliliters of water into the empty vase. Then he added 398 milliliters. If he adds one more liter, will the vase overflow? Why or why not? Justify your answer with equations and a visual model.

Amount of water in vase = W

$$2,419 \text{ mL} + 398 \text{ mL} = W$$

$$2,817 \text{ mL} = W$$

3 liters = 3,000 milliliters. Jose cannot add one more liter to his vase because 2,817 milliliters + 1,000 milliliters = 3,817 mL, which is greater than 3,000 mL.

