PR1 PROBLEM BANK

LESSON 1: EXTRA PRACTICE

1. Franco likes to make a lemon tea that is in a ratio of 4 cups of lemonade to 5 cups of iced tea. He is hosting a party for 15 people and estimates that each person will drink 3 cups of lemon tea.

   a. How much lemon tea should he make so every guest has 3 cups?

   b. Construct a tape diagram to figure out how many cups of lemonade and iced tea Franco should use.

   c. How many cups of lemonade should Franco put in the lemon tea?

   d. How many cups of iced tea should Franco put in the lemon tea?

   e. Create a table to show this situation.

2. The ratio of women to men in a coed volleyball tournament is 2 to 3.

   a. Create a table for this situation.

   b. Using the columns in the table, write two different ratios and explain how you know these ratios involving numbers of people in the tournament are equivalent. Use an arrow diagram if desired.

3. A horse eats 132 bales of hay in 12 months. Answer the following questions. Use a table or diagram to show your reasoning.

   a. How many bales of hay does the horse eat per month?

   b. At that rate, how many bales of hay would the horse eat in 8 months?

   c. How much hay would 3 horses eat in 12 months?

   d. How long would 198 bales last if they were used to feed one horse?

4. About 1 out of 10 people are left-handed.

   a. Make a tape diagram to represent this situation.

   b. In a group of 70 people, about how many people would you expect to be left-handed? Explain how to solve this problem using a tape diagram.

LESSON 1: EXTRA PRACTICE
(Continued)

5. A shade of pink paint requires 5 parts red paint and 2 parts white paint. Use a table or diagram for the following.
   a. How much red paint should you use if you have 1 gallon of white paint?
   b. How much white paint should you use if you have 25 gallons of red paint?
   c. Miko wants to make a whiter shade of pink paint. Write two ratios (red paint to white paint) that would make a whiter shade of pink compared to the original mixture. Explain your reasoning.
   d. Stephen wants to make a redder (darker) shade of pink paint. Write two ratios (red paint to white paint) that would make a redder (darker) shade of pink compared to the original mixture. Explain your reasoning.

6. A neighborhood veterinarian treats cats and dogs in her clinic. She keeps track of her patients, and notices that the ratio of cats to dogs is usually about $1:4$.
   a. Draw a tape diagram to represent this.
   b. How many cats and how many dogs are in the clinic if there are a total of 45 animals?

7. Lita is painting her bedroom. She wants her bedroom to be painted lilac. In order to make this color she mixes together purple and white paint in a ratio of $3:4$.
   a. Draw a tape diagram to represent this.
   b. How many cups of purple does she need if she uses 28 cups of white.
   c. How many cups of white does she need if she uses 9 cups of purple?
   d. How many cups of white paint will she need to make 56 cups of lilac paint?

8. Lexie is making an orange punch drink for a party. She puts 4 pints of orange drink and 2 pints of water into a punch bowl. Her friend Olivia says, “Oh no, you were supposed to make a mixture that is 3 parts orange drink and 4 parts water.” What can Lexie add to the current punch bowl mixture to correct the mistake so that the orange drink mixture is done the way Olivia suggests? Use a tape diagram to help solve this problem.