**Use tape diagrams, unit rates, or ratio tables to solve and support your answers to the following problems.**

1. An advertisement claims that dentists that recommended the new zigzag toothbrush outnumber the dentists that don’t by a ratio of 5 to 3. If 264 dentists were interviewed, how many recommended the toothbrush?
2. A quart (32 ounces) container of yogurt contains 920 calories. About how many calories would there be in a 5-ounce serving?
3. The scale on a map is 3 inches equals 4 miles. How far is the actual distance between two towns that are 10.5 inches apart on the map?
4. Anya’s class is selling wrapping paper. For every 5 rolls they sell, they make a profit of $1.80. If her class has a goal of making a $270 profit, how many rolls of wrapping paper do they need to sell?
5. Sweet Swirl Yogurt Shop sells yogurt and toppings by the ounce. Your 5-ounce serving of chocolate yogurt with Reece crumbles and chocolate chips cost $2.25. What is the cost per ounce? What is the cost be for a 14-ounce serving, 7-ounce serving, and a 10 ounce serving?

There are many kinds of drinks you can buy at the store in the form of a liquid concentrate to which you add water. For example, one kind of lemonade uses 3 cans of water for each can of concentrate to make one pitcher of lemonade.

Cans of water

Can of concentrate

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6. What is the ratio of water to concentrate? How many total cans of liquid are needed for one full batch? (Cans of concentrate are considered liquid)

7. How many total cans of liquid would you use to make 2 batches of lemonade?

8. How would you create a bigger batch of lemonade that uses a total of 20 cans of liquid (both concentrate and water)? How many of these cans would need to be concentrate and how many cans would need to be water?

9. Students are making lemonade for a class party and need to serve everyone who will be coming. From last year’s party, the students estimate they will need 6 batches of lemonade.

* 1. How many cans of concentrate will they need? Cans of water?
  2. If the students want to use pitchers that hold 10 cans worth of liquid each, how many pitchers will they need for the party?