

# Unit 2 Lesson 4: Introducing Double Number Line Diagrams

## 1 Number Talk: Adjusting Another Factor (Warm up)

### Student Task Statement

Find the value of each product mentally.

$$(4.5) \cdot 4$$

$$(4.5) \cdot 8$$

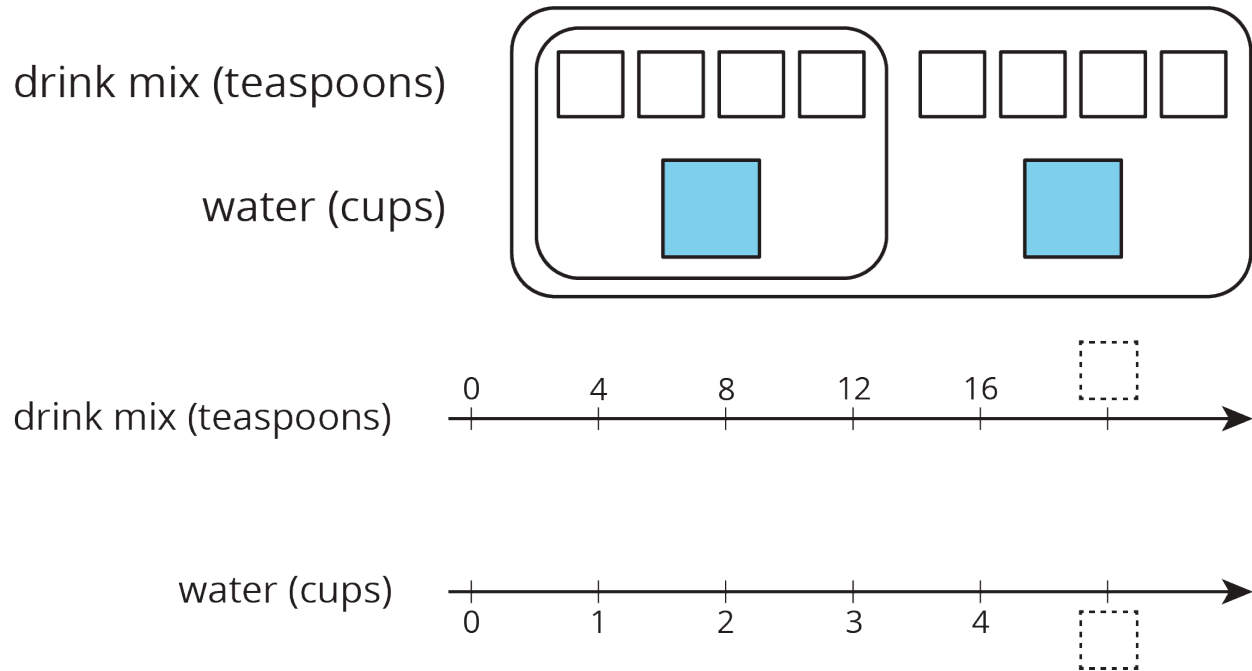
$$\frac{1}{10} \cdot 65$$

$$\frac{2}{10} \cdot 65$$

## 2 Drink Mix on a Double Number Line

### Student Task Statement

The other day, we made drink mixtures by mixing 4 teaspoons of powdered drink mix for every cup of water. Here are two ways to represent multiple batches of this recipe:



1. How can we tell that  $4 : 1$  and  $12 : 3$  are equivalent ratios?
2. How are these representations the same? How are these representations different?
3. How many teaspoons of drink mix should be used with 3 cups of water?
4. How many cups of water should be used with 16 teaspoons of drink mix?
5. What numbers should go in the empty boxes on the **double number line diagram**? What do these numbers mean?

### 3 Blue Paint on a Double Number Line

#### Student Task Statement

Here is a diagram showing Elena's recipe for light blue paint.

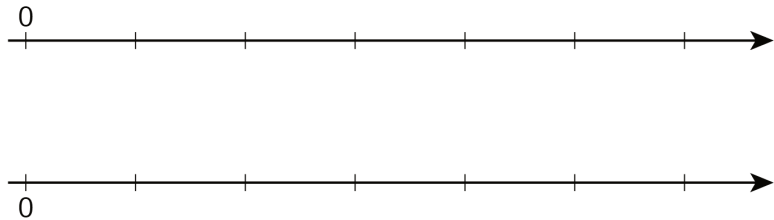
white paint (cups)



blue paint (tablespoons)



1. Complete the double number line diagram to show the amounts of white paint and blue paint in different-sized batches of light blue paint.



2. Compare your double number line diagram with your partner. Discuss your thinking. If needed, revise your diagram.
3. How many cups of white paint should Elena mix with 12 tablespoons of blue paint? How many batches would this make?
4. How many tablespoons of blue paint should Elena mix with 6 cups of white paint? How many batches would this make?
5. Use your double number line diagram to find another amount of white paint and blue paint that would make the same shade of light blue paint.
6. How do you know that these mixtures would make the same shade of light blue paint?