Lesson 4.5.1	

Materials:
• Cuisenaire Rods, 12cm lines to represent the whole (optional)

Fluency	**Application Problem**
Do "Read Tape Diagram" to continue to build understandings of tape diagrams.	As is.

Concept Development

Framing:
Yesterday we talked about "unit fractions." Just like we can add any other unit--pencils, dogs, tens--we can add unit fractions. In fact, we add unit fractions to build up to other fractions.

Try This:
Start with a brief discussion to link the Cuisenaire rod work to the tape diagrams (see below).
Model putting two purple pieces together, next to the boozle line. Direct students: "Write an addition equation to match what I just did and what I have now." Have students share that they could have written ⅓ + ⅓ = ⅔. Draw a tape diagram to model what you just did (2 copies of ⅓).

- Do another example with a different rod, say 3 red rods, to show addition of unit fractions one at a time.
- Then try an example where you start with 2 pieces down and add a third, to show something like ⅔ + ⅓ = 3/3. Show how this would look on a tape diagram.
- Then model adding 5 one-fourths to show how to mark off 1 whole from the 5 one-fourths. The problem sets show this. Make sure to keep all of the rods together even when going over 1 whole, to show that these are 5 fractional units together, and 4 of them together is the same as 1 whole.

Have students try out the Problem Set from here. They might work in partnerships and be expected to justify their thinking to their partners.

Conferring questions (below):	**Conferring questions (on/above):**
• How many of this fractional unit would it take to make a whole? • What is this unit fraction? If you have two of them, how could you draw it in a tape diagram? • What do you notice about fractions when they add up to greater than one?	• How can you tell if your sum is greater than 1? • How could you tell between what whole numbers any fraction is?

Problem Set: Modified Problem Set

Debrief

Look for misconceptions about how notation is used and discuss examples. Use as an opportunity to show the tape diagram.