



## Decimal Sums on the Number Line

The interactive white board tool for this lesson can be found on our website under Resources and Teacher Tools. ([www.dreambox.com/teachertools](http://www.dreambox.com/teachertools))

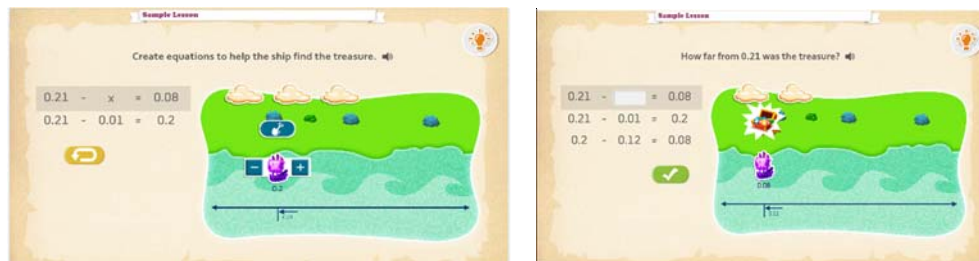
In this DreamBox lesson, students use a number line to add and subtract decimals and solve for a variable in a "change unknown" situation.

### Sample Lesson

**Objective:** The purpose of this lesson is for students demonstrate an understanding of friendly equations to solve one-step addition and subtraction equations.

**Background:** Students should have an understanding of solving one-step equations and decimal operations.

### Instruction:



1. Open the DreamBox interactive white board lesson.
2. The teacher begins, "We are looking for a missing value. Who has an idea for how we could begin?"  
Possible responses:
  - "We subtract."
  - "We subtract one number from another."
  - "We subtract the first number from the answer."
  - "We can create friendly equations to subtract."
  - "I don't know what to do. I'd like to use the hint button."
3. The teacher begins by clicking on the hint button. The hint provided suggests to create a friendly equation and the teacher invites one student to approach the board to create the first friendly equation. After the first equation, ask the student if what she did was helpful and why.  
Possible responses:
  - "Yes, because creating friendly equations makes the problem easier to solve mentally."
  - "Yes because it moves the pirate ship closer to the answer."

4. After students share their responses and the pirate ship moves to the next location, ask another student to create the next friendly equation. This may also be an appropriate time to talk about how many equations can be created. The hint button will tell them the number of clouds is equivalent to the number of possible equations. Then ask the class, “Should we dig for treasure?” In other words, should you click on the shovel to determine if the answer is correct.
5. Once the class comes to a consensus, either click on the shovel or invite a different student to create the third equation. Repeat the discussion and once the treasure is discovered, ask students to turn to a partner and determine how to find the final answer.
6. After students have discussed their options, choose a student to come up to the board to try his or her strategy. Discuss with students whether this was a good strategy and ask students to defend their explanations as to why or why not. For those that say it was not a good strategy, ask them where we should go from there.
7. Continue to prompt students to explore creating friendly equations and discuss their strategies for finding the final answer. Discuss which strategies are more useful than other, and give students ample opportunity to explore and make sense of the number line with multiple examples.