

Factoring Quadratic Expressions with Arrays



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

In this DreamBox lesson, students use an array to represent a quadratic expression written in standard form. Then students will write the quadratic in factored form.

Objective: Students will use an array to create represent a quadratic expression written in standard form.

Background: Students should have been introduced to quadratic expressions.

- Instruction:**
1. Each student, pair of students, or small group should have access to a laptop, computer, or tablet and notebook paper/pencil.
 2. Have students discuss with their partner or groups how they would solve the array. After a few minutes, begin a class discussion of possible strategies.
 3. After the discussion, choose one student to create the array. Using the blue arrow button, the student will drag the array in to create negatives and outside to create positives.
 4. Before the student clicks the green check to see the answer is correct, click on the help button (the blue middle button with 2 books) to show the numerical values created within the array.



5. Allow the students to regroup and discuss if the array is correct. Once the class majority agrees, click the green check button.
6. If the array is correct, allow the students to work with their partner/group to write the quadratic expression in factored form. Choose a different student to fill in the answer and explain how they developed their answer. Then click the green button to check for accuracy.

Once the problem is complete, have students copy the quadratic expression in standard form, factored form, and draw the array on the notebook paper.



7. Repeat the activity, giving multiple students an opportunity to share their answers and explanations. Students should continue to document the answers on their notebook paper.
8. Then allow students to work with their partner/group to complete a set of problems on their own. Again, instruct students to write the information on the notebook paper. This paper can be collected to ensure students understand how to create arrays to represent quadratic expressions and shows the difference standard and factored form.