

Date _____

Name _____

Factoring with Algebra Tiles

Open the game and click "Play Demo", or log in with your username and password.
Once you're in, click on "Practice" (Not 'start game').

Work through 4 problems in Level 1. Write down the question (i.e. *standard form*) and your answer (the *factored form*), along with a sketch of your solution rectangle.

Problem 1:

Sketch of Rectangle:



Factored Form:

Problem 3:

Sketch of Rectangle:



Factored Form:

Problem 2:

Sketch of Rectangle:



Factored Form:

Problem 4:

Sketch of Rectangle:





Factored Form:



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Now, work through 2 problems in Level 2. Click on the 'new problem' button until you see negative (blue) tiles on the screen. You can put a "+" or "-" sign inside your tiles if you don't have coloured pencils.

<p>Problem 5: <input type="text"/></p> <p>Sketch of Rectangle:</p>  <p>Factored Form:</p> <input type="text"/>	<p>Problem 6: <input type="text"/></p> <p>Sketch of Rectangle:</p>  <p>Factored Form:</p> <input type="text"/>
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Now, work through 2 problems in Level 5. Click on the 'new problem' button until you see negative (blue) small squares (1x1's) on the screen. **You will have to manually input any required zero pairs! (space bar)**

<p>Problem 7: <input type="text"/></p> <p>Sketch of Rectangle:</p>  <p>Factored Form:</p> <input type="text"/>	<p>Problem 8: <input type="text"/></p> <p>Sketch of Rectangle:</p>  <p>Factored Form:</p> <input type="text"/>
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Congratulations! You are well on your way to factoring like a pro! Look back over the problems and their factored form. Try to notice a relationship between the numbers in the brackets and the original numbers in the standard form expression.

Describe the pattern or rule for writing the factored form, given a standard form expression like $x^2 + bx + c$?

My Rule:

Now, you can try playing the game! You may wish to return to the home screen and read through the rules first. See you on the Worldwide Factris Leaderboard!

You can play the game at home too, if you're running Windows. Your game is saved online automatically! Ask your teacher where to get the software.

EXIT CHECK: Apply your rule to find the factored form of:

a) $x^2 + 9x + 20$

b) $x^2 + 2x - 8$

Level 4 Criteria

- Eight different standard form expressions have been accurately copied down, and are of the required type (negative tiles present for levels 2 and 5 questions)
- All quadratic tile models have been correctly assembled into rectangles
- The factored form has been correctly written for all questions.
- A correct and sufficient rule has been described, explaining the relationship between the numbers in the brackets and the numbers in the standard form expression.
- Rule has been successfully applied to new problems (exit check).