7.2 Multiplying Polynomials by Monomials

Explore Multiplying a Polynomial by a Monomial

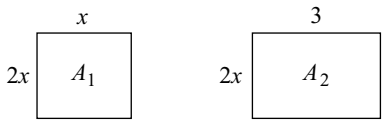
The following notes provide guidelines to help you adapt the Explore Multiplying a Polynomial by a Monomial section from *MathLinks 9*.

- Read the introduction aloud and discuss the scenario as a class.
- Do #1 and #2 as a teacher-led activity.
- Students may benefit from doing #3 to #8 in groups of two or three students. Assign one strong reader to each group.

Examples

Working Example 1:

- Students may benefit from writing the width of the rectangle on both sides of the rectangle.
- For the Show You Know, you may wish to draw the rectangles on the board and label each one:



Working Example 2:

- Remind students that subtracting is the same as adding the opposite. So, $3x - 5 = 3x + (-5)$.
- Have students first do the example using algebra tiles. Then, encourage them to complete the work on paper. Explain that it does not matter whether $2x$ is on the vertical part of the frame or the horizontal, because $2 \times 3 = 3 \times 2$.

Working Example 3:

- Review the distributive property.

Communicate the Ideas, Practise, and Apply

- Students may benefit from doing #1 and #2 with a partner.
- Have students use algebra tiles to complete #6 before writing their answer on paper.
- Distribute **BLM 7–2 Algebra Tile Frames**.
- Provide students who need additional practice with **BLM 7–4 Section 7.2 Extra Practice**.

Common Errors

- In #8, students may use binomials incorrectly in the formula for perimeter.

R_x Encourage students to use brackets before applying the distributive property. Alternatively, allow them to use the sum of all sides and then combine like terms.