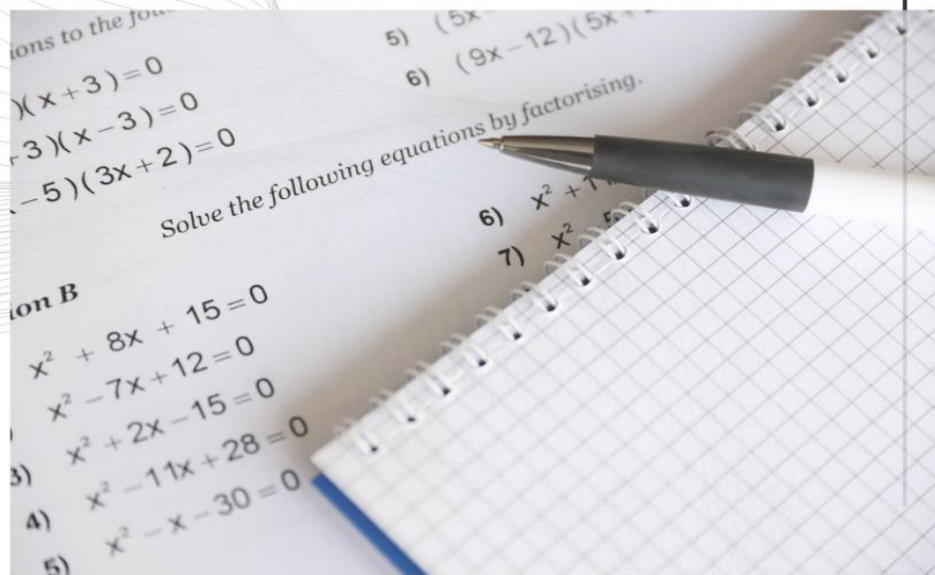


# SUPPLEMENTARY MODULE 6

Multiplying Simple Monomials and Binomials with  
Simple Binomials with Simple Binomials and  
Multinomials, Using the Distributive Property with  
Various Techniques and Models



**GRADE-8**

## **WELCOME, AMAZING LEARNER!**

If you're finding the multiplication journey a bit challenging, fret not! Remember, Rome wasn't built in a day, and mastering multiplication takes time and practice. You're doing fantastic already by being here and putting in the effort. Let's tackle this together, step by step. Each stumbling block is just another opportunity to grow and learn. Keep your chin up, and let's conquer these mathematical mountains together. You've got this!



## **LEARNING OBJECTIVES**



Enumerate the advantages and disadvantages of using different models in multiplying monomials and binomial.

**1**

Evaluate the different methods of multiplying simple monomials and binomials with simple binomials and multinomials

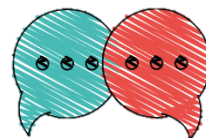
**2**

Exhibit objectivity in evaluating the effectiveness of each method in multiplying simple monomials and binomials with simple binomials and multinomials

**3**



## Advantages and Disadvantages of Polynomial Multiplication Methods



Technique/Model	Advantages	Disadvantages
<b>Distributive Property</b>	<ul style="list-style-type: none"> <li>Helps understand multiplying polynomials by breaking it into smaller parts.</li> <li>Can be used for different types of polynomials.</li> <li>Makes you think and understand algebra better.</li> <li>Helps you learn the basics of algebra.</li> </ul>	<ul style="list-style-type: none"> <li>Takes time for big or hard problems because you have to do each part one by one.</li> <li>Need to be careful to avoid mistakes.</li> <li>Can get confusing with many terms.</li> <li>Not as easy to understand as other methods.</li> </ul>
<b>FOIL Method</b>	<ul style="list-style-type: none"> <li>Gives a step-by-step way to multiply binomials.</li> <li>Makes sure you don't miss any steps.</li> <li>Good for simple problems with two terms.</li> </ul>	<ul style="list-style-type: none"> <li>Only works for problems with two terms, not more.</li> <li>Might be hard to remember or understand for some.</li> <li>Gets tricky with more than two terms.</li> </ul>
<b>Vertical Method</b>	<ul style="list-style-type: none"> <li>Gives a clear way to do the multiplication, step by step.</li> <li>Helps keep things in order, reducing mistakes.</li> <li>Can be used for bigger problems easily.</li> </ul>	<ul style="list-style-type: none"> <li>Only works for two-term problems, not more.</li> <li>Need to be careful with the setup, which can be hard with many terms.</li> <li>Not as easy to understand visually for some people.</li> <li>Not as common, so some may not know about it.</li> </ul>
<b>Box Method Area Model</b>	<ul style="list-style-type: none"> <li>Shows the multiplication visually, making it easier to understand.</li> <li>Helps see how terms are spread out.</li> <li>Good for harder problems with lots of terms.</li> </ul>	<ul style="list-style-type: none"> <li>Takes time to draw and label boxes, which can be annoying for some.</li> <li>Can get messy and hard to follow with lots of terms.</li> <li>Not as well-known as other methods, so some people may not be familiar with it.</li> <li>Better for people who like pictures, so not great for everyone.</li> </ul>



## TIPS AND KEYS TO REMEMBER



1. **Understand the Basics:** First, know what a polynomial is. It's like a math sentence with different parts called terms.
2. **Practice, Practice, Practice:** The more you practice multiplying polynomials, the better you'll get at it.
3. **Use the Right Method:** Find the method that works best for you and stick with it.
4. **Take it Step by Step:** Don't rush! Take your time and do each step carefully. Make sure you multiply each term in one polynomial by every term in the other polynomial.
5. **Watch out for Signs:** Be careful with positive and negative signs.
6. **Check Your Work:** After you're done, double-check your answer to make sure it's correct.

