# Adding and Subtracting Polynomials

We can add and subtract polynomials by combining like terms and simplifying. Remember, “like” terms contain the same variables raised to the same exponents.

Examples: Simplify each expression by combining like terms.

# Multiplying Polynomials

One method of multiplying polynomials requires using the distributive property and then combining like terms.

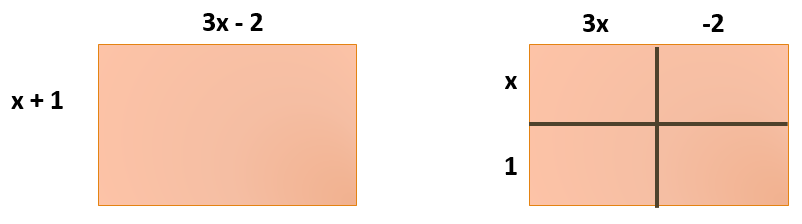
Another method is to use the Area Model:

If we want to multiply ), assign each binomial to a side of the rectangle.

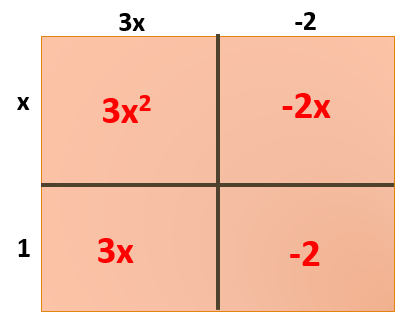
Our goal is to calculate the area of the full rectangleby splitting the side lengths into more manageable parts.

Use “” and subdivide the side of the rectangle.

Use “” and subdivide the top of the rectangle.



Then fill in the area of each internal rectangle.



Finally add up all of the areas and combine like terms:

Examples: Simplify each expression by multiplying and combining like terms. Use the area model or the distributive property.