Coreq Support for Section 5.4

Topic 1: Solving Exponential Equations by Relating the Bases

Recall from section 5.1 that some exponential equations can be solved by using the Method of Relating the Bases. If \( b \) is a positive number other than 1 and \( b^u = b^v \), then \( u = v \).

Topic 2: Understanding the Definition of a Logarithmic Function

Definition: For \( x > 0, b > 0 \) and \( b \neq 1 \), the logarithmic function with base \( b \) is defined by \( y = \log_b x \) if and only if \( x = b^y \).

The definition of a logarithmic function can be used to rewrite a logarithmic equation as an equation involving an exponent or to rewrite an equation involving an exponent as a logarithmic equation.
Topic 3: Solving Quadratic Equations by Factoring

Topic 4: Evaluating Expressions with Negative and Rational Exponents