

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