

$$\log_b(n) = x \Leftrightarrow b^x = n$$

The diagram illustrates the relationship between logarithmic and exponential forms. On the left, the logarithmic equation $\log_b(n) = x$ is shown. Arrows indicate the mapping of variables: an arrow points from the base b (in red) to the base b in the exponential form; an arrow points from the argument n (in blue) to the result n in the exponential form; and an arrow points from the result x (in purple) to the exponent x in the exponential form. In the center is a large grey double-headed arrow $\Leftrightarrow$ indicating equivalence. On the right, the exponential equation $b^x = n$ is shown. Arrows indicate the mapping of variables: an arrow points from the base b (in red) to the base b in the logarithmic form; an arrow points from the exponent x (in purple) to the argument x in the logarithmic form; and an arrow points from the result n (in blue) to the argument n in the logarithmic form.