Inverse Functions – Part II
Preliminaries and Objectives

Preliminaries

- Inverse Functions
- One-to-One Functions

Objectives

- Define inverses for functions that are not one-to-one
Exponential and Logarithm Function

\[ y = e^x \]
Powers and Roots

\[ y = x^2 \]

\[ x = y^2 \]
Powers and Roots

\[ y = x^2 \]

\[ x = y^2 \]

\[ y = \sqrt{x} \]
Powers and Roots

$y = x^2$

$y = \sqrt{x}$
$y = \sin x$
$y = \sin x$
$y = \sin x$
Wave Graphs
Recap

- To find an inverse function of a one-to-one function, interchange $x$ and $y$.

- If the original function is not one-to-one, restrict the domain to a portion that is one-to-one.
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