

Objective: To determine the inverse of exponential functions.

Warm Up:

1. Rewrite the following by converting from exponential to logarithmic or logarithmic to exponential.

A.) $6^3 = 216$

B.) $\log_5 25 = 2$

2. How can you tell from looking at a graph whether two functions are inverses?

Recall:

How to Determine an Inverse Function

- Change the function notation to _____
- Switch _____ and _____
- Solve for _____ (get y _____)
- Rewrite y using _____

Example 1: Determine the inverse function of $g(x) = 3^x$

Example 2: Determine the inverse function of $f(x) = 4^x + 3$

Example 3: Determine the inverse function of $f(x) = 2^{x-4} + 5$