Class Discussion

Unit 3 Topic 2 Part 2 Logarithmic functions

Objective: Graph the general function $f(x) = k + \log_a(x-h)$ , apply its inverse and find a base of a logarithmic equation when the base is an unknown

Ex 1 Graph

(a) $f(x) = 1 + \log_{\frac{\sqrt{3}}{3}}(x+3)$

(b) $f(x) = -2 + \log_{\sqrt{3}}(x+2)$

Ex 2 Given $f(x) = \log_a(x-1)$ , if $f(5) = 4$ Find $a$ ?

Ex 3 Given $g(x) = -1 + \log_3(x-2)$ ,

(a) Find $g^{-1}(x)$ ,

(b) the implied domain and range of $g^{-1}$ ,

(c) graph both $g$ and $g^{-1}$ on the same coordinate plane.