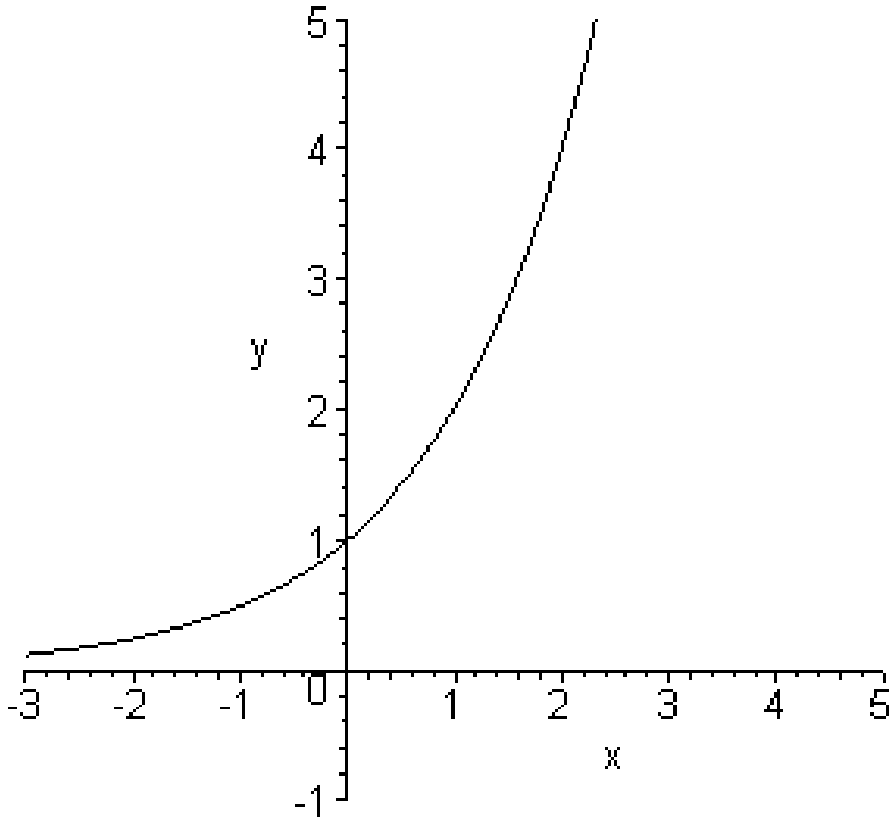
# Math 002 – 081

# Exponential and Logarithmic Functions

# Graph of

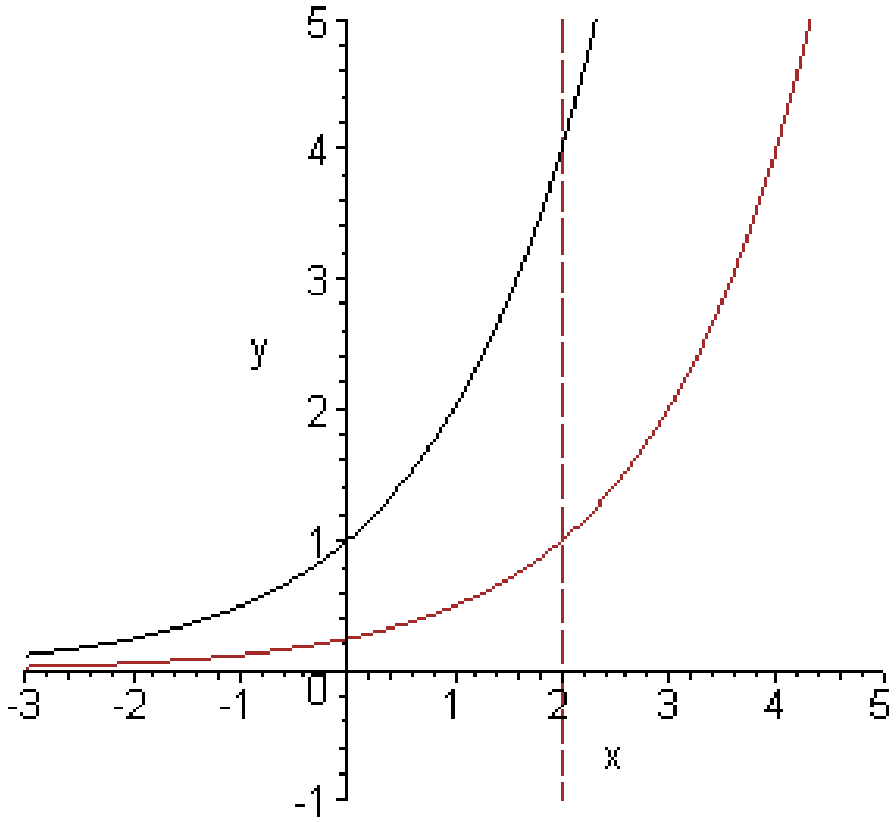
$$f(x) = 1 + 2^{x-2}$$




Black Graph: Graph of $f(x) = 2^x$

# Graph of

$$f(x) = 1 + 2^{x-2}$$

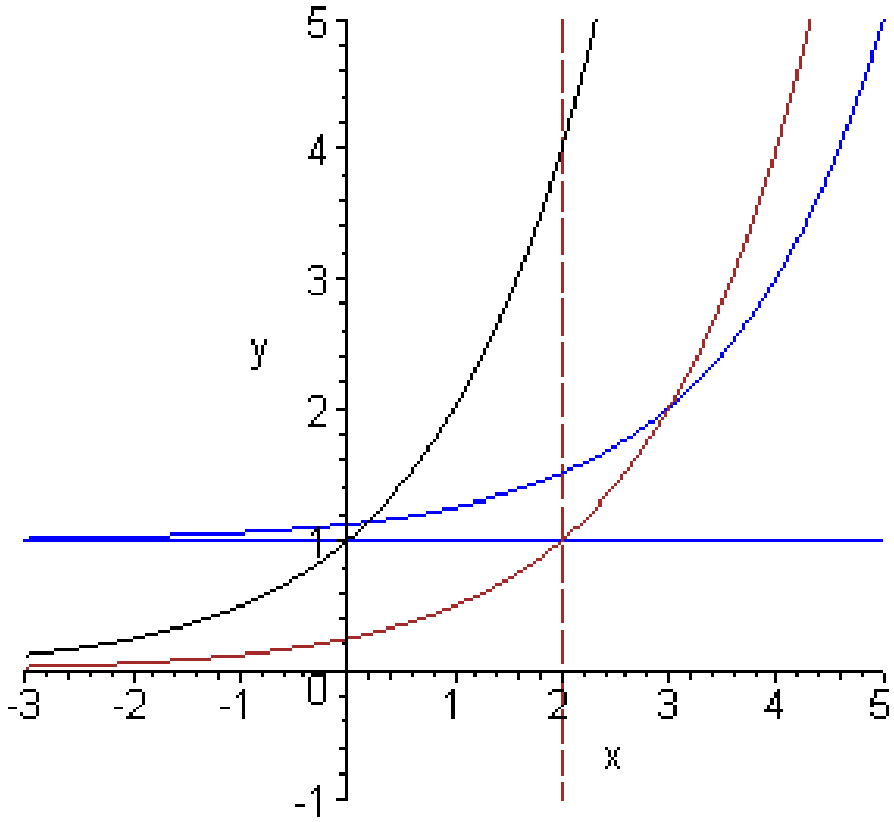



Brown Graph: Graph of $f(x) = 2^{x-2}$

Same as black graph but shifted 2 units right

# Graph of

$$f(x) = 1 + 2^{x-2}$$

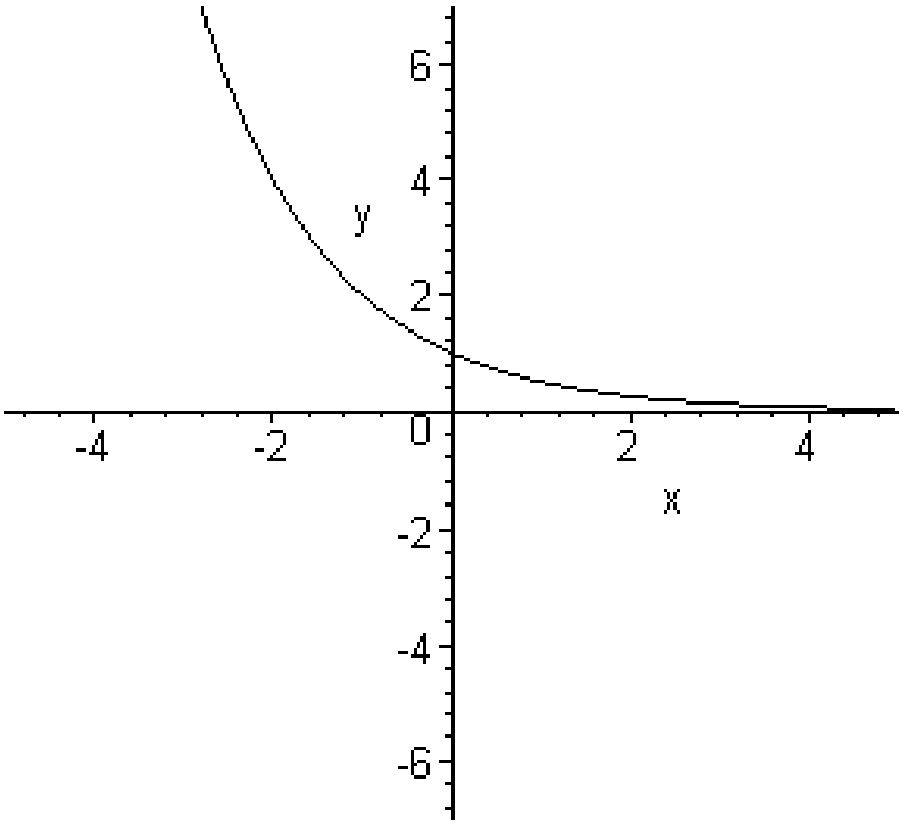



Blue Graph: Graph of $f(x) = 1 + 2^{x-2}$

Same as brown graph but shifted 1 units up

# Graph of

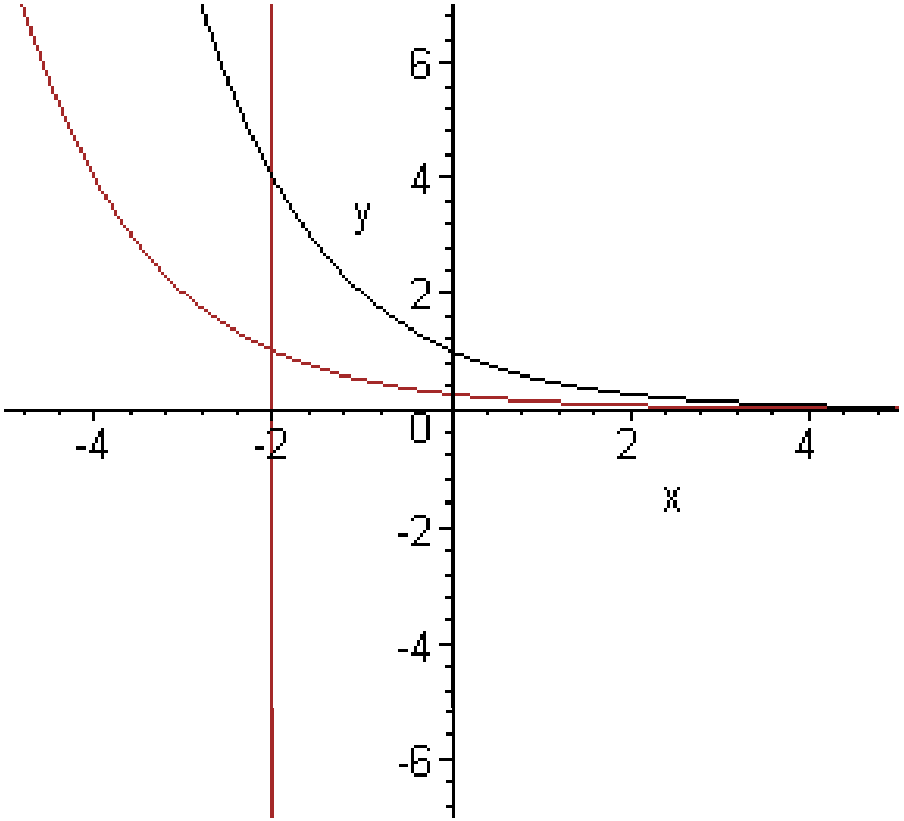
$$f(x) = -2^{-x-2} - 3$$




Black Graph: Graph of $f(x) = 2^{-x}$

# Graph of

$$f(x) = -2^{-x-2} - 3$$

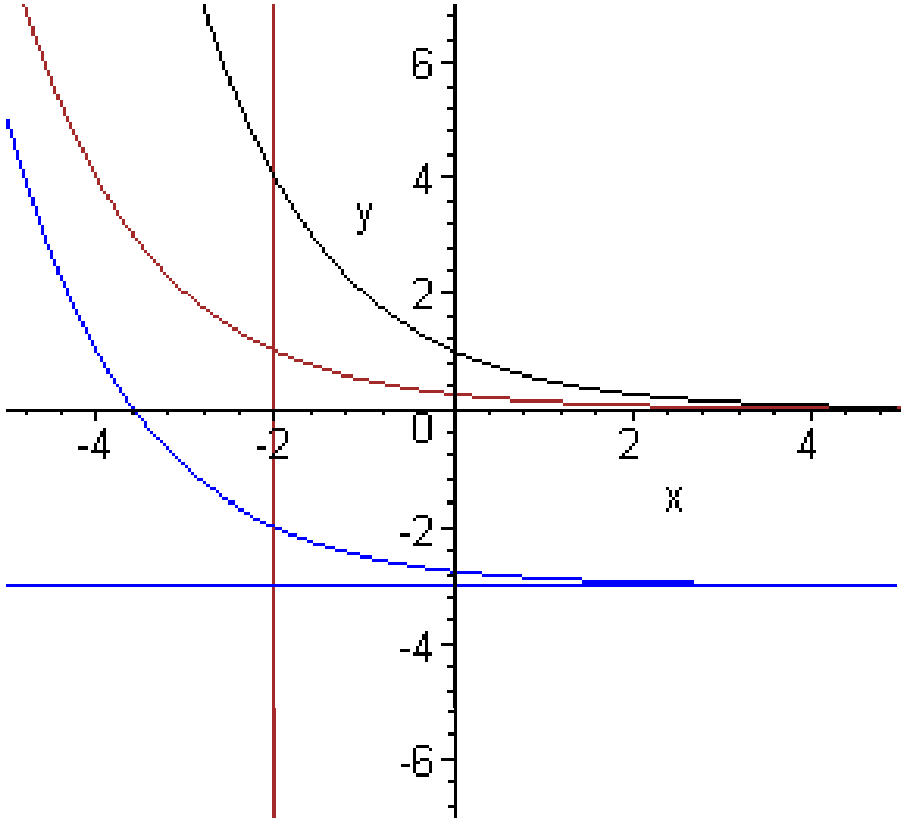



Brown Graph: Graph of $f(x) = 2^{-x-2}$

Same as black graph but shifted 2 units left

# Graph of

$$f(x) = -2^{-x-2} - 3$$

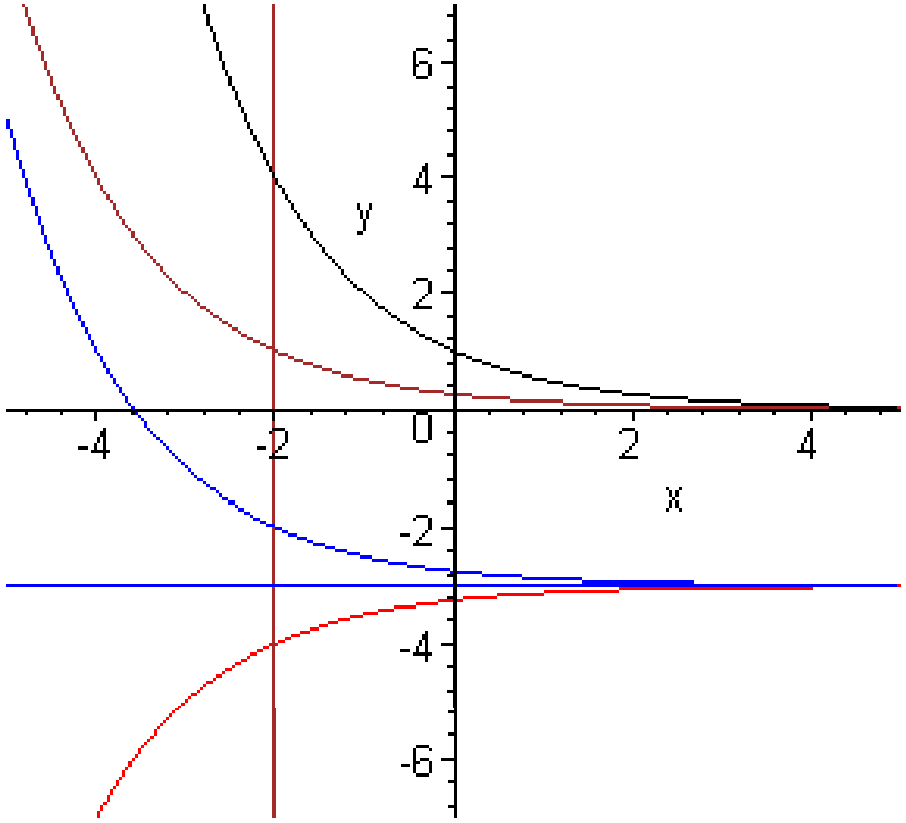



Blue Graph: Graph of $f(x) = 2^{-x-2} - 3$

Same as brown graph but shifted 3 units down

# Graph of

$$f(x) = -2^{-x-2} - 3$$

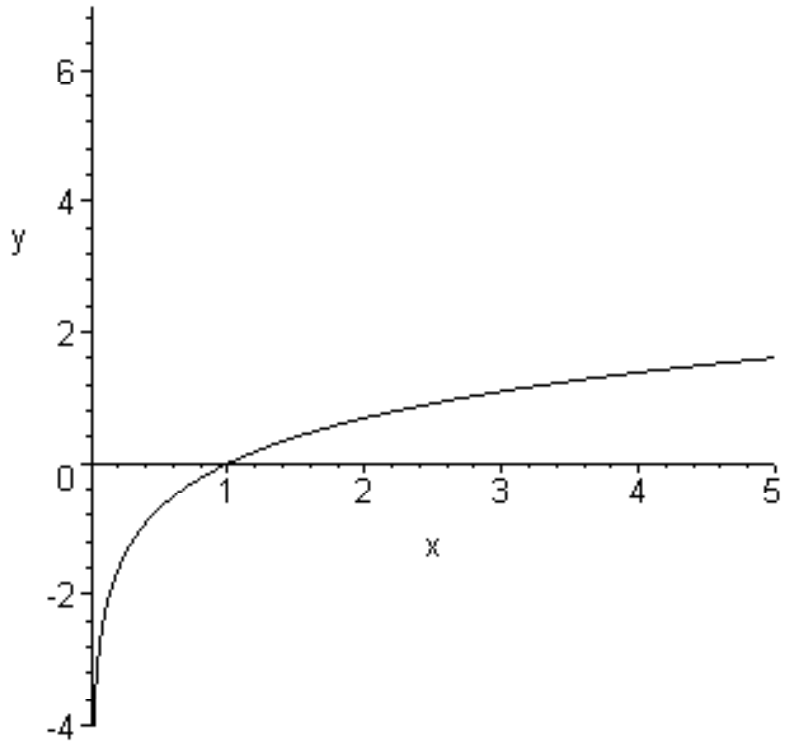



Red Graph: Graph of $f(x) = -2^{-x-2} - 3$

Same as blue graph but reflected about y = -3

# Graph of

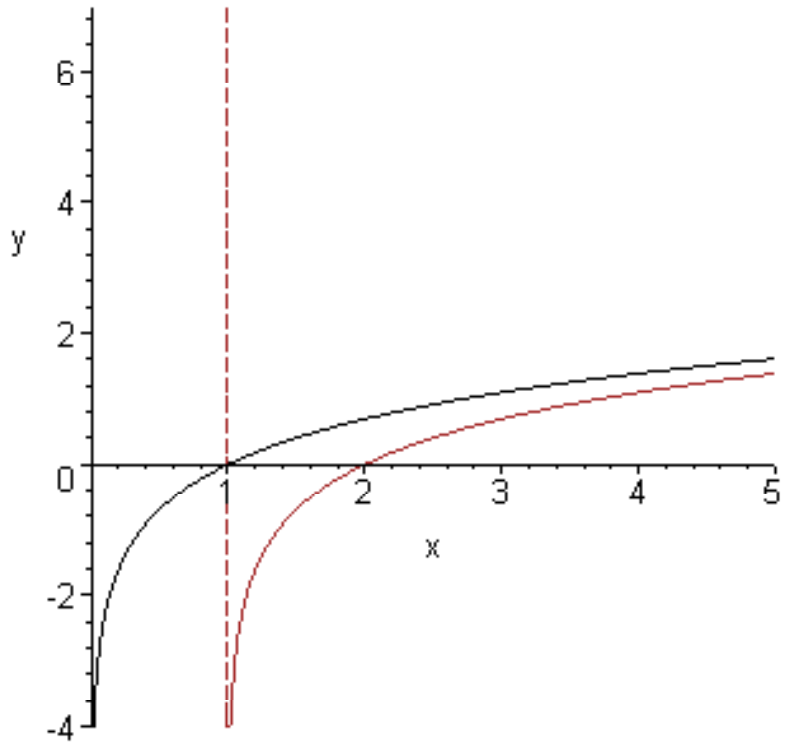
$$f(x) = -\log(x-1) + 3$$




Black Graph: Graph of $f(x) = \log(x)$

# Graph of

$$f(x) = -\log(x-1) + 3$$

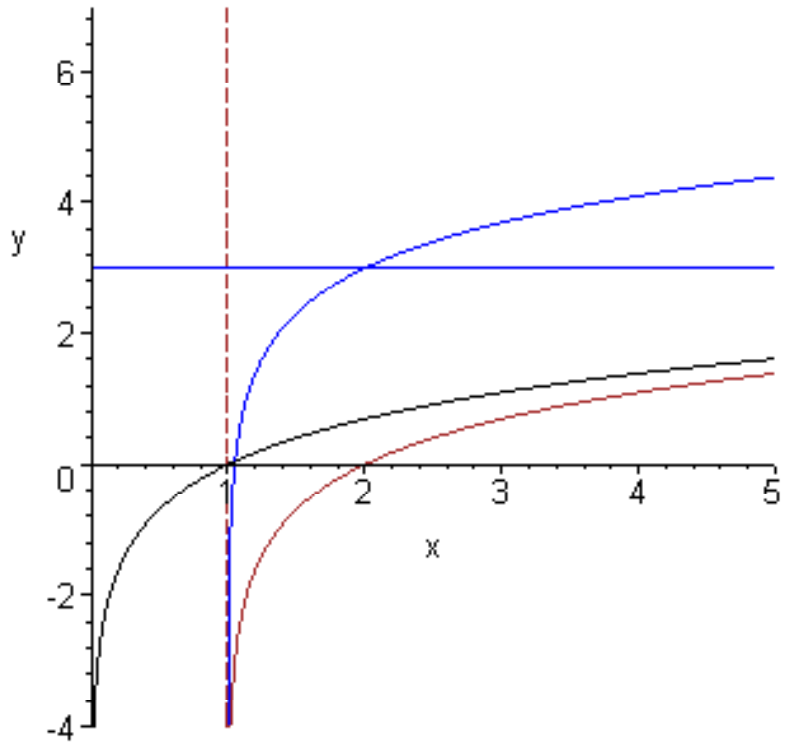



Brown Graph: Graph of $f(x) = \log(x-1)$

Same as black graph shifted 1 unit right

# Graph of

$$f(x) = -\log(x-1) + 3$$

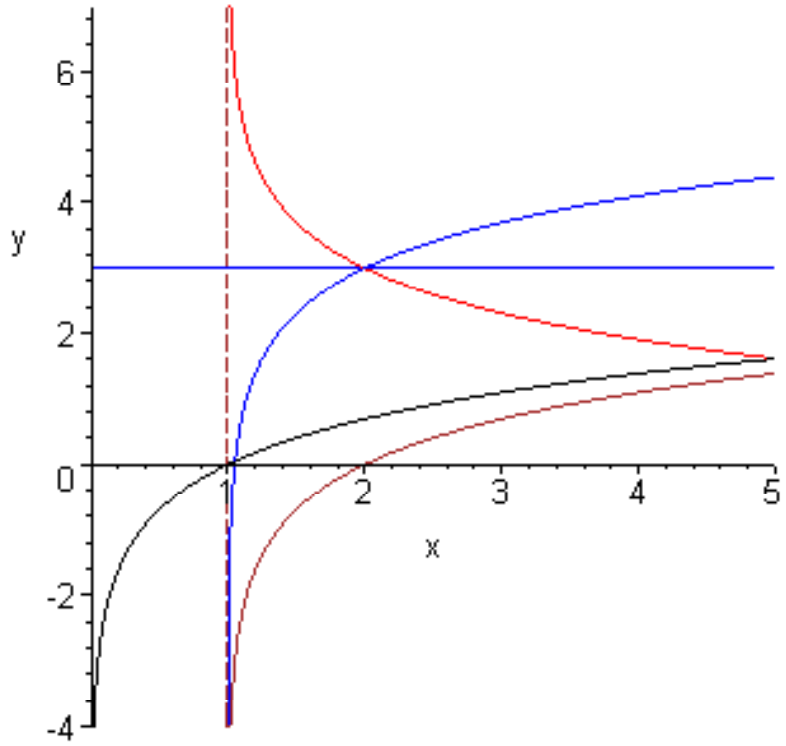



Blue Graph: Graph of $f(x) = \log(x-1) + 3$

Same as brown graph shifted 3 units up

# Graph of

$$f(x) = -\log(x-1) + 3$$




Red Graph: Graph of $f(x) = -\log(x-1) + 3$

Same as blue graph reflected about the line y = 3