

$$g(x) = 5^x$$

$$(0, 1)$$

Base function

$$y = 0$$

Always Increasing

$$f(x) = 5^{-x}$$

$$(0, 1)$$

$$y = 0$$

Always Decreases

$$h(x) = 5^{x-2}$$

$$(0, 1/25)$$

$$y = 0$$

Increases

$$g(x) = 5^{-x} - 3$$

$$(0, -2)$$

$$y = -3$$

Decreasing

$$f(x) = \left(\frac{3}{2}\right)^x \quad y=0 \quad (0,1) \quad \text{I}$$

$$h(x) = \left(\frac{3}{2}\right)^{-x} \quad y=0 \quad (0,1) \quad \text{D}$$

$$g(x) = \left(\frac{3}{2}\right)^{x+2} \quad y=0 \quad (0, \frac{9}{4}) \quad \text{I}$$

$$f(x) = \left(\frac{3}{2}\right)^{-x} + 2 \quad y=2 \quad (0,3) \quad \text{D}$$

natural base

$$e = 2.718281828 \dots$$

$$f(x) = e^x \quad e^1(-2)$$

$$f(-2) = 0.1353$$

$$f(.25) = 1.284$$

$$f(-0.4) = .6703$$

$$f(x) = 100 e^{0.01x}$$

$$f(12) = 112.75$$

$$f(x) = -5.5 e^{-x}$$

$$f(200) = .000 \dots \dots$$

$$100 \cdot e^{(0.01 * 12)}$$

$$40) y = 3^{-|x|}$$

$$46) g(x) = 1 + e^{-x}$$

$$48) g(x) = \frac{8}{-1 + e^{(-0.5/x)}}$$

Homework

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# 39-49 odd

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