

Practice Exponential and Logistic Functions

Identify all of the requested information for each function below, then match the function with its graph:

1. $f(x) = (3/4)^{-x} + 2$

a = _____

b = _____

growth or decay

(circle one)

Eq. of H.A.: _____

y-intercept: (____, ____)

2. $f(x) = (3/4)^{-x-1} + 2$

a = _____

b = _____

growth or decay

(circle one)

Eq. of H.A.: _____

y-intercept: (____, ____)

3. $f(x) = (3/4)^{-x-2} - 1$

a = _____

b = _____

growth or decay

(circle one)

Eq. of H.A.: _____

y-intercept: (____, ____)

4. $f(x) = (1/3)^{-x+1}$

a = _____

b = _____

growth or decay

(circle one)

Eq. of H.A.: _____

y-intercept: (____, ____)

5. $f(x) = -(1/3)^{-x+1}$

a = _____

b = _____

growth or decay

(circle one)

Eq. of H.A.: _____

y-intercept: (____, ____)

6. $f(x) = -(1/3)^{-x-1} + 2$

a = _____

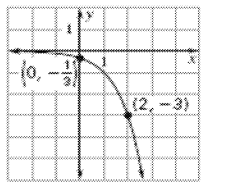
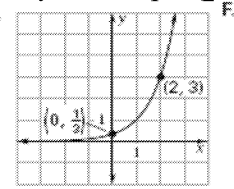
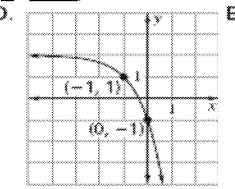
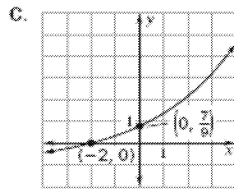
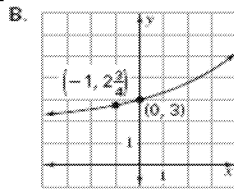
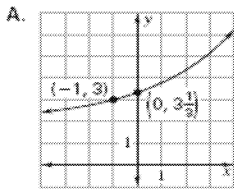
b = _____

growth or decay

(circle one)

Eq. of H.A.: _____

y-intercept: (____, ____)



7. Explain the transformations applied to the graph of $f(x)$ which would result in the graph of $g(x)$

a. $f(x) = (4/3)^x$
 $g(x) = (0.75)^{x+4} + 2$

b. $f(x) = 2^x$
 $g(x) = -2/3(4)^{x+6}$

c. $f(x) = 4^x$
 $g(x) = (2)^{x+8} - 11$

8. For each of the following logistic functions state the requested information and sketch:

a. $f(x) = \frac{30}{1+5(0.4)^x}$

b. $f(x) = \frac{120}{1+3(0.2)^x}$

c. $f(x) = \frac{198}{1+17(0.3)^x}$

Initial Value: _____

Initial Value: _____

Initial Value: _____

Limit to Growth: _____

Limit to Growth: _____

Limit to Growth: _____

Asymptotes: _____

Asymptotes: _____

Asymptotes: _____

D: _____ R: _____

D: _____ R: _____

D: _____ R: _____

LEB: _____ REB: _____

LEB: _____ REB: _____

LEB: _____ REB: _____

