Assessment
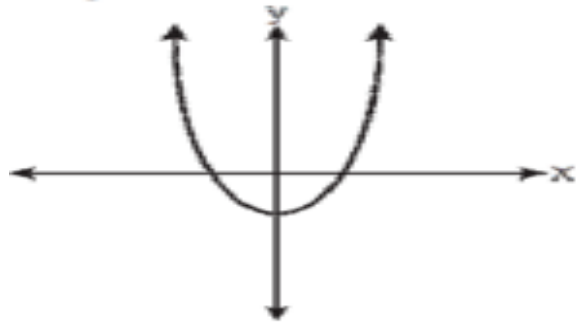
Mathematics: Lesson28
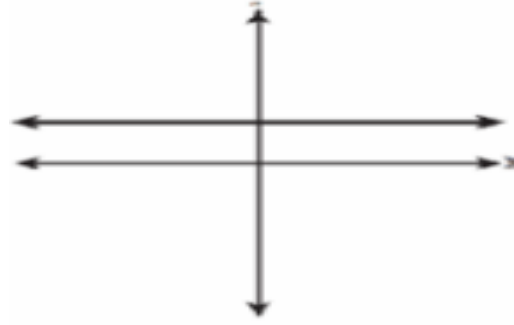
Which graph represents a one-to-one function

A.

B.

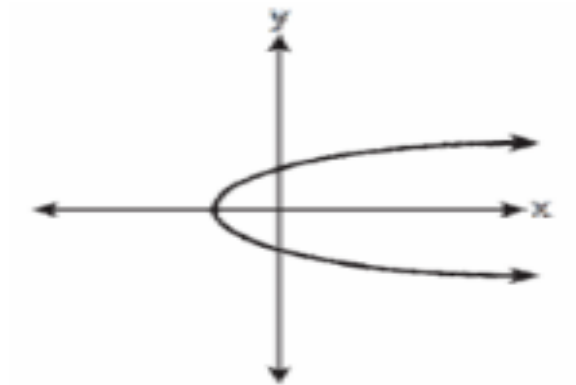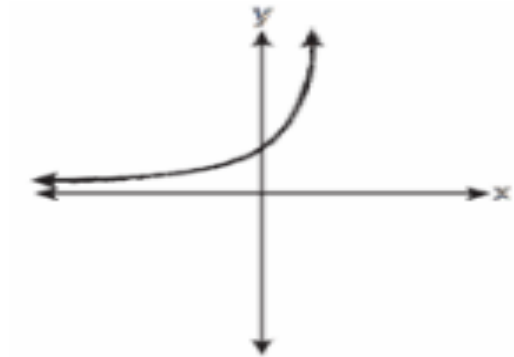

C.

D.
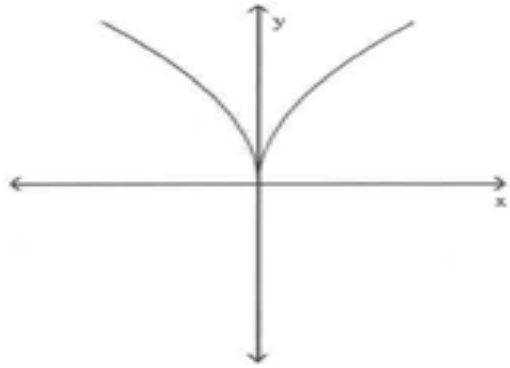
Indicate whether the function is one-to-one $\{(-8,-15),(13,-3),(5,7)\}$

A. True

B. False

Use the horizontal line test to determine whether the function is one-to-one.

A. No

B. Yes

Which function is **not** one-to-one ?

A. $\{(0,1),(1,2),(2,3),(3,4)\}$

B. $\{(0,1),(1,0),(2,0),(3,2)\}$

C. $\{(0,0),(1,1),(2,2),(3,3)\}$

D. $\{(0,1),(1,0),(2,3),(3,2)\}$

The inverse function of $\{(2,6),(-3,4),(7,-5)\}$ is

A. $\{(-2,6),(3,4),(-7,-5)\}$

B. $\{(2,-6),(-3,-4),(7,5)\}$

C. $\{(-6,-2),(-4,3),(5,-7)\}$

D. $\{(6,2),(4,-3),(-5,7)\}$

Let f be the one-to-one function defined by the following set of ordered pairs. Find f $^{-1}$(4)

$$\{(-3,2),(4,5),(7,4),(10,19)\}$$

A. $\dfrac{1}{4}$

B. $\dfrac{1}{5}$

C. 5

D. 7

Which of the following is the inverse to the function $f(x) = -8 - 5x$

A. $f^{-1}(x) = -\dfrac{x}{5} - \dfrac{8}{5}$

B. $f^{-1}(x) = -\dfrac{1}{5x} - \dfrac{1}{8}$

C. $f^{-1}(x) = \dfrac{x}{5} + \dfrac{8}{5}$

D. $f^{-1}(x) = 5x + 8$

Find the inverse of $f(x) = \dfrac{x+3}{2}$

A. $2x + 3$

B. $2x - 3$

C. $3x - 2$

D. $3x + 2$

Which of the following is the inverse of the function $f(x) = 5x + 1$?

A. $f^{-1} = -5x - 1$

B. $f^{-1}(x) = \dfrac{x-1}{5}$

C $f^{-1}(x) = 5x - 1$

D. $f^{-1}(x) = \dfrac{x+1}{5}$

Decide whether or not the functions are inverse to each other.

$$f(x) = 9x - 9, \qquad g(x) = \frac{1}{9}x + 1$$

A. No

B. Yes

Assessment

Mathematics: Lesson29

The graph of f(x)=3^x

A. Intersects the x-axis

B. Intersects the y-axis

C. Intersects both axes

D. Intersects neither axis

Find the domain of $f(x) = 6^x$

A. All positive real numbers

B. All real numbers

C. All reals greater than one

D. All reals less than zero

Find the range of $\quad y = 2^x - 3$

A. $\quad [3, \infty)$

B. $\quad (3, \infty)$

C. $\quad (-3, \infty)$

D. $\quad [-3, \infty)$

Given the following exponential function $f(x) = \left(\dfrac{1}{2}\right)^{x}$, how would $f(x+2)$ transform the graph?

A. Moves 2 left

B. Moves 2 down

C. Stretch 2 times closer to *y*-axis

D. Stretch 2 times away from *x*-axis

Is the function $y = 4.5^x$ the same as the function $y = 20^x$?

A. Yes

B. No

Solve the equation $2^{1+2x} = 32$

A. $\{2\}$

B. $\{4\}$

C. $\{16\}$

D. $\{-2\}$

Solve the equation $2^{x^2} - 3 = 64$

A. $\{6\}$
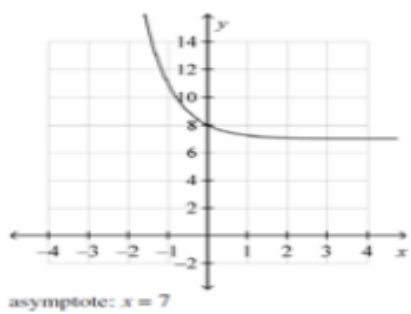
B. $\{3\}$

C. $\left\{\sqrt{35}, -\sqrt{35}\right\}$

D. $\{3, -3\}$

Given the function $f(x) = 1.4e^{0.25x}$ find $f(13)$ to the nearest thousandth

A. 12.368

B. 23.370

C. 36.106

D. 619378.749

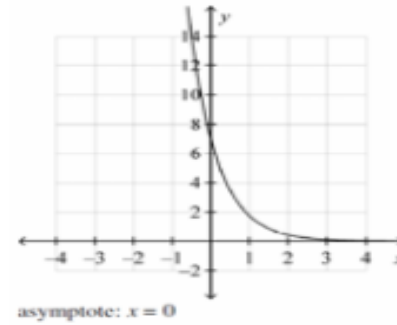Choose the graph of $y = 7\left(\dfrac{10}{4}\right)^x$ and state the asymptote

A.

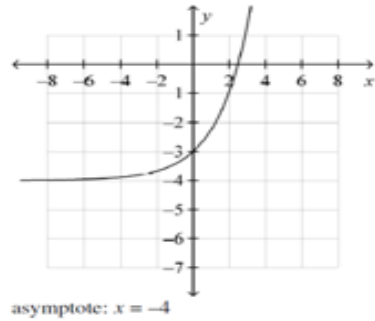asymptote: $x = 7$
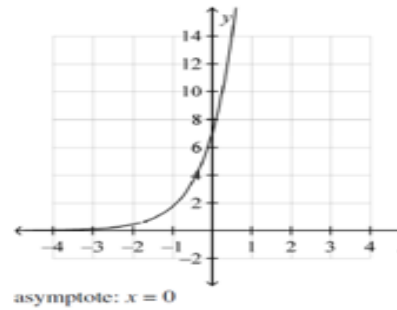
B.

asymptote: $x = 0$

C.

asymptote: $x = -4$

D.

asymptote: $x = 0$
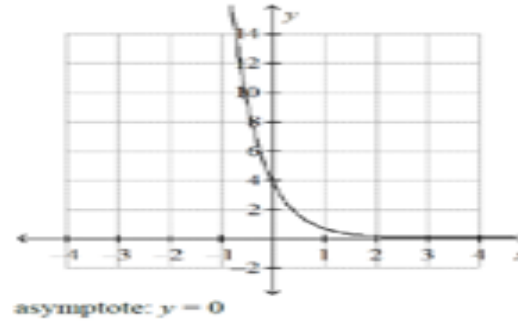
$$y = 4\left(\frac{1}{6}\right)^x$$

A.

asymptote: $y = 0$

B.

asymptote: $y = 0$

C.

asymptote: $y = 4$

D.

asymptote: $y = -6$
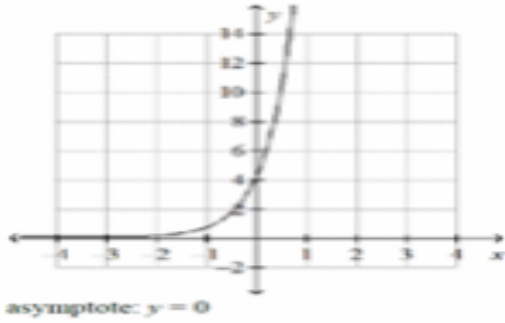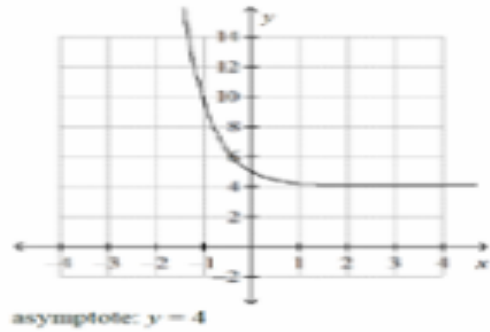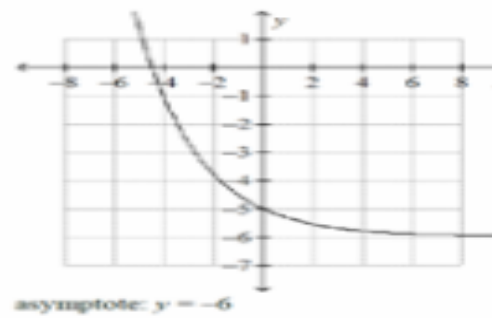
Assessment

Mathematics: Lesson30

Write the equivalent of the following function $y = \log_7 x$

A. $y = 7^x$

B. $x = 7^y$

C. $x = 7 \log_y$

D. $y = 7 \log_{x^7}$

Find the domain of $y = \log x$

A. All real numbers

B. All positive real numbers

C. All reals greater than one

D. All reals less than zero

Find the range of $y = \log(x) + 2$

A. $[1, \infty)$

B. $[2, \infty)$

C. $(2, \infty)$

D. $(-\infty, \infty)$

Use the properties of logarithms to find the exact value of the expression. Do not use a calculator. $\log_2 14 - \log_2 7$

A. 1

B. 2

C. 14

D. 7

The equation 2 = $\log_{x+1}(y + 1)$ can be written as:

A. $y = \dfrac{2}{\log_{x+1}} - 2$

B. $y = (x+1)^2 - 1$

C. $y = 2(x+1) - 1$

D. $y = \log_{x+1} 2 - 1$

Write as the sum and/or difference of logarithms. $\log_3 \dfrac{\sqrt[2]{5}}{x^2 y}$

A. $\dfrac{1}{2}\log_3 - 2\log_3 x - \log_3 y$

B. $\log_3 5 - \log_3 x - \log_3 y$

C. $\dfrac{1}{2}\log_3 5 - 2\log_3 x - 2\log_3 y$

D. $2\log_3 5 - 2\log_3 x - \log_3 2$

Solve $\quad \log_2(2x+1)=3$

A. $x = 1$

B. $x = 4$

C. $x = 3$

D. $x = 3.5$

Solve the equation $\log_4(x+4)+\log_4(x-2)=2$

A. $\{4\}$

B. $\{5\}$

C. $\{x,-6\}$

D. $\{-6\}$

The expression $\log_{\frac{1}{5}}\left(\dfrac{1}{x}\right)$ is equivalent to:
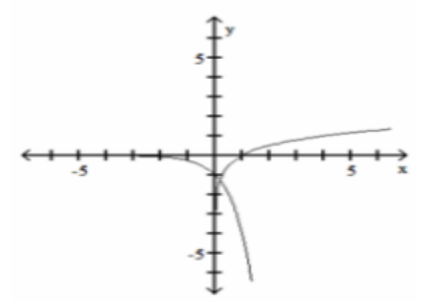
A. $-\log_5 x$

B. $\log_5 x$

C. $\log\left(\dfrac{x}{5}\right)$

D. $\log(5x)$
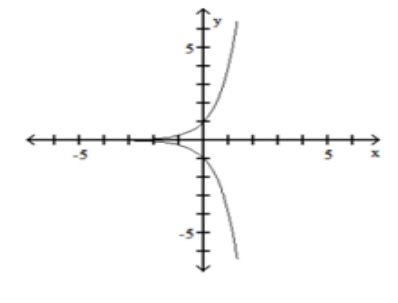
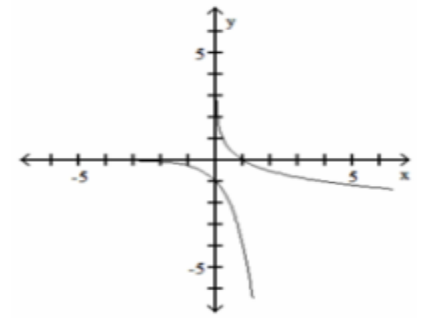Graph the function and its inverse on the same *x-y* axis $f(x) = \log_4 x$

A.

B.

C.

D.