

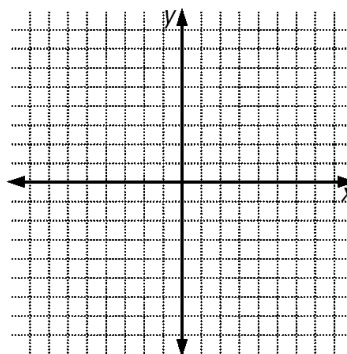
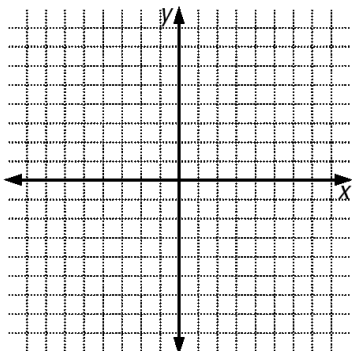
Evaluate the function at the indicated value of x .

$$f(x) = 0.3^x \quad \text{for } x = 1.1$$

$$f(x) = (2.342)^{\frac{x}{3}} \quad \text{for } x = \sqrt{5}$$

Use the graph of f to describe the transformation that yields the graph of g .

$$f(x) = 3^x ; g(x) = 3^x + 1$$



Use the one-to-one property to solve for x .

$$2^{2x+4} = \frac{1}{64}$$

$$e^{8-4x} = e^{-4}$$

$$\log_3(2x - 1) = \log_3 8$$

$$\ln(x^2 - 3x) = \ln 10$$

Write the exponential equation in logarithmic form.

$$5^3 = 125$$

$$7^2 = 49$$

Write the logarithmic equation in exponential form.

$$\log_{16} 64 = \frac{3}{2}$$

$$\log_{25} 5 = \frac{1}{2}$$

Find the domain

$$\log(x + 3) + 4.5$$

Evaluate the logarithm using change-of-base

$$\log_9 84$$

$$\log_7 23$$

Use the properties of logarithms to *expand*

$$\log 3x^2$$

$$\ln\left(\frac{y-1}{3x}\right)^2$$

Use the properties of logarithms to *condense*

$$\ln(x + 3) - (2 \ln y + \ln(x - 3))$$

$$2 \log(x + 3) + \log 4 - 2 \log(y - 1)$$

Solve

$$4^x = \frac{1}{185}$$

$$\log_7 x = 4$$

$$e^{4x} = 32.$$

$$2 \log_4 x + \log_4 7 = 6$$

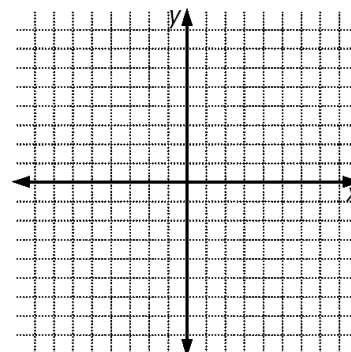
You deposit \$8500 in an account that pays 5.1% interest, compounded continuously. How long will it take for the money to double?

$$A = Pe^{rt}$$

Use the parent function to graph the function

Be sure to label at least two points and any asymptotes.

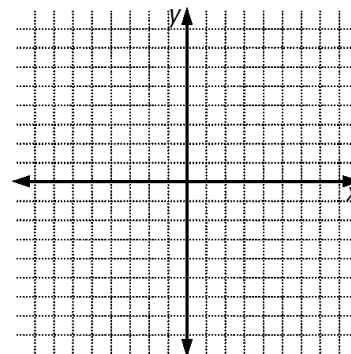
$$f(x) = 3^{x-2} + 1.$$



Use the parent function to graph the function

Be sure to label at least two points and any asymptotes.

$$f(x) = \log_3(x - 1)$$



Let Q represent a mass of radioactive iodine (in grams), whose half-life is 241 years.

The quantity of iodine present after t years is: $Q = 85 \left(\frac{1}{2}\right)^{t/h}$.

- (a) Determine the initial quantity (when $t = 0$).

- (b) Determine the quantity present after 456 years.