

Exponential Functions

Logarithms and Exponential Functions Review

Convert to an exponential equation.

$$1) \log_4 \left(\frac{1}{16} \right) = -2$$

$$2) \ln 6^a = 2.3$$

$$3) \log_4 64 = t$$

$$4) \ln 41 = 3.7136$$

Convert to a logarithmic equation.

$$5) y^z = 5$$

$$6) e^{-t} = 216$$

$$7) 1,000,000^{1/6} = 10$$

$$8) e^{-3} = 0.04979$$

Solve the exponential equation.

$$12) 3(12 - 2x) = 729$$

$$13) e^x - 5 = \left(\frac{1}{e^3} \right)^{x+2}$$

$$14) e^{4x} - 1 = (e^2)^{-x}$$

$$15) 3x^2 + 4x = \frac{1}{27}$$

Find the exact solution to the equation.

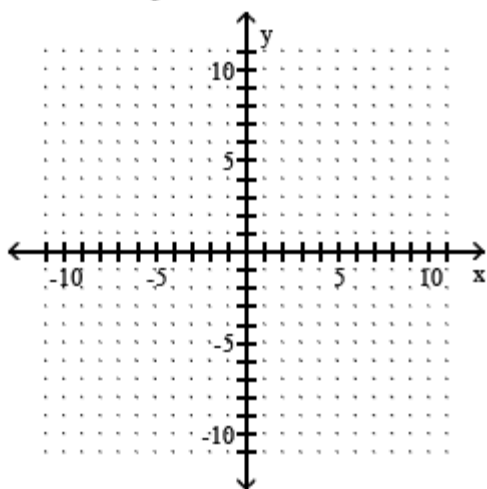
$$9) \log_5(x - 6) = -1$$

$$10) \ln e^9$$

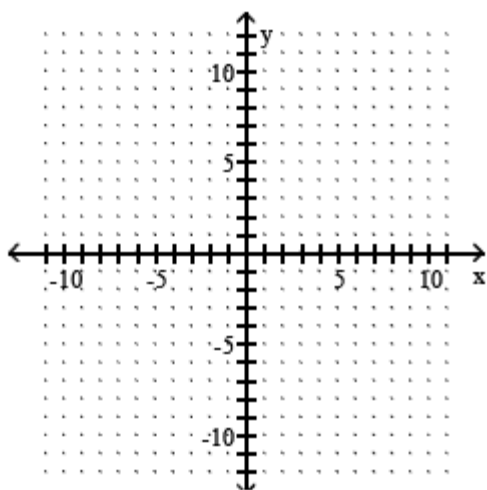
$$11) 7 - \log_{10}(x + 5) = 6$$

Graph the function.

16) $f(x) = \log_5 (x - 2)$.



17) $g(x) = \log x - 2$.



Solve the logarithmic equation.

18) $\log (x - 3) = 1 - \log x$

19) $\log_4 (x - 3) + \log_4 (x - 3) = 1$

20) $\ln(5x - 4) = \ln 24 - \ln (x - 6)$

21) $\log (x + 10) - \log (x + 4) = \log x$

22) $\ln(2x - 3) = \ln 3 - \ln (x - 1)$

Find the present value. Round to the nearest cent. $A = P\left(1 + \frac{r}{k}\right)^{kt}$

23) To get \$2000 after 2 years at 5% compounded semiannually

Solve the problem. $A = Pe^{rt}$

24) What principal invested at 6.5% compounded continuously for 4 years will yield \$2500?
Round the answer to two decimal places.