



6-4 Additional Practice

Logarithmic Functions

Graph the function below and identify the domain, range, x-intercept, y-intercept, asymptote, and end behavior. Compare the graph to the parent function.

1. $f(x) = \log_4(x - 2) + 2$

domain:

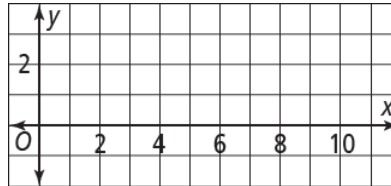
range:

x-intercept:

y-intercept:

asymptote:

end behavior:



Find the inverse of each function.

2. $f(x) = 6 \log_5(2x - 6)$

3. $f(x) = 2 \log_{0.5}(-5x) + 4$

4. $f(x) = \ln 3^x - 2$

5. A hurricane center uses the function $s = 95 \log d + 75$ to relate the wind speed in miles per hour s and distance in miles d a hurricane travels. How many miles will the hurricane travel with a wind speed of approximately 320 mph?

6. Which company's profit shows a greater average rate of change between 2010 and 2015?

Company A: \$1.5 million profit in 2010; after 5 years, grew exponentially to \$2.5 million.

Company B: profit, in million of dollars, modeled by $P(B) = 1.3(1.15)^x$, where x is the number of years after the end of 2010.