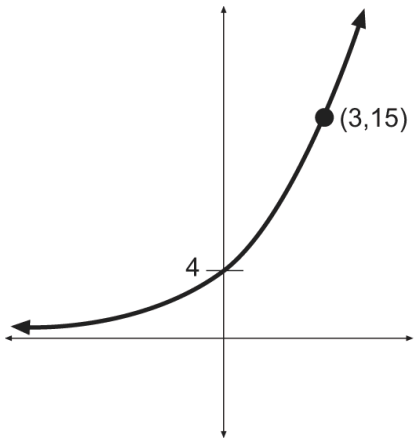
PreCalculus
Quiz

Your Name:



1. Find the function of the form $f(x) = Ca^x$ whose graph is given.

2. For the same function, solve for x when $f(x) = 25$.

(3-8) Evaluate the expression.

3. $\log_4 4$

4. $\ln e^5$

5. $7^{\log_7 49}$

6. $\log_3 \left(\frac{1}{9}\right)$

7. $\log_a 1$

8. $\log_{16} 4$

(9-14) Solve for x.

9. $8^x = 512$

10. $\log_x 100 = 2$

11. $\log_3 x = 2$

12. $2^{x-2} = 23$

13. $8 + 3\ln(9x) = 29$

14. $\log_7(x-5)+\log_7(x+1)=1$

15. Find the function of the form $A(t) = Ce^{rt}$ that goes through the points (0 , 7.5) and (2 , 9.16).

16. Bob invests $5300 in an account that pays 4.5% interest per year, compounded continuously such that $A(t) = Pe^{rt}$. How long will it take Bob's investment to triple?

17. Recall that the magnitude of an earthquake on the Richter scale is defined to be:

$M = \log\frac{I}{S}$, where S is the "standard" intensity of 1 micron amplitude.

Earthquake A measures 5 microns in **amplitude**. Earthquake B measures **magnitude 7.5 on the Richter scale**. Earthquake B is how many times more powerful than earthquake A?