

Algebra and Calculus Worksheet 8

November 9, 2015

1. **Section 4.1 - 33**

Graph $y = 5^{-x} + 1$, and state the domain, range, and asymptote.

2. **Section 4.1 - 37**

Graph $2^{x-4} + 1$, and state the domain, range, and asymptote.

3. **Section 4.2 - 10**

Graph $1 - e^x$, and state the domain, range, and asymptote.

4. **Section 4.2 - 15**

Graph $e^{x+1} - 3$, and state the domain, range, and asymptote.

5. **Section 4.3 - 31(b)**

Evaluate $5^{\log_5(27)}$.

6. **Section 4.3 - 29(b)**

Evaluate $\log_{10}(\sqrt{10})$.

7. **Section 4.3 - 33(c)**

Solve for x : $\log_x(8) = \frac{3}{2}$.

8. **Section 4.3 - 61**

Graph $\log_5(-x)$, and state the domain, range, and asymptote.

9. **Section 4.3 - 69**

Graph $\log_3(x - 1) - 2$, and state the domain, range, and asymptote.

10. **Section 4.3 - 77**

What is the domain of $\ln(x) + \ln(2 - x)$?

11. **Section 4.4 - 47**

Expand: $\log\left(\sqrt{\frac{x^2+4}{(x^2+1)(x^3-7)^2}}\right)$ using the Laws of Logarithms.

12. **Section 4.4 - 55**

Combine: $\ln(a + b) + \ln(a - b) - 2\ln(c)$ using the Laws of Logarithms.