MAC1105 College Algebra
5.4 Practice Problems

Solve each exponential equation.

1. $4^{2x+4}=64$

2. $8^{x+3}=4^{x-2}$

3. $3^{2x+1}=\frac{1}{27}$

4. $3^{x}=19$

5. $4^{x+5}=5^{2x-3}$

6. $30e^{2x}-5=355$

7. $3^{2x}-8\cdot 3^{x}+15=0$

Solve each logarithmic equation in problems 8 - 12. Be sure to reject any value of x that is not in the domain of the original logarithmic expression.

8. $\log_3(x+5)=4$

9. $\log_6 x+\log_6(x+5)=2$

10. $3\ln x=12$

11. $\log_4 x+\log_4(x+6)=2$

12. $\log_3(x-2)+1=\log_3(3x+1)$