Handout 3: The Simple Life

1. Expand and simplify
   $y = \ln(ex^2 + 3ex + 2e)$.

2. Simplify $y = e^{lnx}$.

3. Simplify $y = 9^{\log_3 2x}$.

4. Simplify $y = \log_4(16^{5x})$.

5. Expand $y = \log(4x^2 z^2)$.

6. Expand $y = \log \frac{3xy}{z^2}$.

7. Expand $y = \log 4x^2 - 16$.

8. Combine $y = \frac{1}{2}(\log 2x + 2\log y + \log z^2)$.

9. Combine $y = 4(\log \sqrt{x} + \log x \log z)$.

10. Simplify $\ln e^2 + 6e + 9$.