Handout 3: The Simple Life

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

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

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

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

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

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

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

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

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

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

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