3.6 Practice Activity

Practice 3.6-1-1:

Solve the exponential equation.

$$5^x = 2^{x+1}$$

1. Ensure the equation has exponential expressions on both sides with a coefficient of 1, or one side is an exponential expression with a coefficient of 1 and the other side is a constant.
2. Apply a logarithm (either ln or log) to both sides of the equation.
3. Use logarithmic properties to bring the exponent down in front.
4. Solve for x.

Practice 3.6-2-1:

Solve the logarithm equation

$$ln(x) - ln\,(2 - x) = ln(3)$$

Practice 3.6-2-2:

Solve the logarithm equation

$$\log_4(x) + \log_4(x - 3) = 1$$