3.4 Practice Activity

Practice 3.4-1-1:

Find the domain of giving the logarithmic function.

$$f(x) = \log_3(2x - 9)$$

1. Identify the variable:
2. Set the argument of the log greater than 0:
3. Solve for x:

Practice 3.4-2-1:

Converting the following logarithmic equations to exponential equations.

a. $\log_4(R) = Q$

b. $\log(W) = 5$

Practice 3.4-2-2:

Converting the following exponential equations to logarithmic equations.

a. $7 = 21^x$

b. $4^w = 13$

Practice 3.4-3-1:

Evaluating the logarithmic without using a calculator.

$$y = \log_3\left(\frac{1}{27}\right)$$

Practice 3.4-4-1:

Solve the logarithmic equation.

$$\log_5(x - 3) = 2$$

4. Translate to an exponential equation.

5. Solve for x.

6. Use the domain to check the answer, select the one that fits the domain $(x > 0)$.