Solving Logarithmic Equations

- Check to see if there are any logarithms that you can take out of the problem, evaluate, and replace. For example, $\log_2 8$ could be replaced with 3.

- If the equation is written in exponential form, rewrite it in logarithmic form. If the equation is written in logarithmic form, rewrite it in exponential form.

- Solve the remaining equation!

- Check your answer using your calculator's store function.

$$\log \sqrt{10}$$

$$\log_{2x} 80 = 2$$

$$4\left(\log_3 \frac{1}{27}\right) = x$$

$$\log_3(5x + 7) = 2$$

$$3^{\log_3 7} = x$$

$$\log_{12} 12^{2n} = x$$