Solve for x: \( \log(x) = -3 \)

Note: There are two strategies for solving logarithmic equations. The first: use the property if \( \log a = \log b \), then \( a = b \) [\( a \) and \( b \) both positive]. We cannot use this property because of the term \(-3\). The second strategy is to rewrite the logarithm as an exponential function. We will use this strategy:

This is a common logarithm with base 10, so rewrite as an exponential function with base 10

\[
10^{-3} = x
\]

\[
X = \frac{1}{1,000} \text{ or } .001
\]