Understanding the negative exponent rule!

\[
\frac{x^3}{x^5} \text{ would equal } x^{3-5} = x^{-2}
\]

but we know \[
\frac{x^3}{x^5} = \frac{x^{3}}{x^{3} \cdot x^{2}}
\]

and \[
\frac{x^3}{x^{2} \cdot x^{3}} \text{ becomes } \frac{1}{x^2}
\]

Since \( x^{-2} \) and \( \frac{1}{x^2} \) are both solutions, they are equal \( \frac{1}{x^2} = x^{-2} \)

* Negative exponent rule *

If \( x \neq 0 \) then

\[
x^{-m} = \frac{1}{x^m}
\]