Incorrect. In this case, $\dfrac{\left(a^{-3}b^2c^{-4}\right)^3}{\left(a^{-4}bc^2\right)^4}$ can be simplified to $\dfrac{a^{-3(3)}b^{2(3)}c^{-4(3)}}{a^{-4(4)}b^4c^{2(4)}}$, which can then be simplified to $\dfrac{a^{-9}b^6c^{-12}}{a^{-16}b^4c^8}$. Remember that $\dfrac{x^n}{x^m} = x^{n-m}$. Does this help you simplify the expression?