22. Let $f(x) = x + \sqrt{x^2 + 1} + \dfrac{1}{x - \sqrt{x^2 + 1}}$. What is the value of $f(2015)$?

A -1 B 0 C 1 D $\sqrt{2016}$ E 2015

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22. B $f(x) = x + \sqrt{x^2 + 1} + \dfrac{1}{x - \sqrt{x^2 + 1}} = \dfrac{\left(x + \sqrt{x^2 + 1}\right)\left(x - \sqrt{x^2 + 1}\right) + 1}{x - \sqrt{x^2 + 1}}$. The numerator is $x^2 - \left(\sqrt{x^2 + 1}\right)^2 + 1 = -1 + 1 = 0$. So $f(x) = 0$. Hence $f(2015) = 0$.