

Problem 2 (due Monday, February 24)

Is it possible to find two functions $f, g: \mathbb{R} \rightarrow \mathbb{R}$ and a rational function $S(u, w)$ in two variables such that $\cos(xy) = S(f(x), g(y))$ for all real numbers x, y . (Recall that a rational function in 2 variables is a quotient of two polynomial functions in two variables).

The problem was solved by Josiah Moltz and Dr Mathew Wolak. Their solutions follow the same idea as our in-house solution. For details see the following link [Solution](#).

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