# 2015-2016 University of Utah Undergraduate Problem Solving Contest <br> Problem 2 <br> Due 23 Oct 

Find $p(1 / 2)$ where $p$ is the unique polynomial of degree four such that the coefficient of $\mathrm{x}^{\wedge} 4$ in the product of $p(\mathrm{x}) q(\mathrm{x})$ always equals $q(1)$ for any polynomial $q$ of degree 4 or less.

