# 2018-2019 Undergraduate Problem Solving Contest

## Problem Number 1

### Due October 29, 2018

Find all the $\mathbb{R}$ solutions to the following system of equations.

$$x^4 + y^4 = 1$$

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Provide the numerical solution or solutions, and prove that your $\mathbb{R}$ solution(s) are the only ones that can exist.

In the spirit of UPSC, you should not use the internet or look up the solution in a book. Please include your name, student ID number, and email address on your solution. Submit answers at the front desk of the T. Benny Rushing Mathematics Center.