Math 3325 **PRINCIPLES OF MATH** Fall 2019
Dr. Duval **Homework 4**
due Thursday, September 26

1. Let β be a real number. Prove that if β^3 is irrational, then β is irrational.

2. Prove that

$$\{n \in \mathbb{Z} \colon n = 7 + 10k \text{ for some } k \in \mathbb{Z}\} = \{n \in \mathbb{Z} \colon n = 10k - 3 \text{ for some } k \in \mathbb{Z}\}$$