My class has 26 students all of different heights and different names. Show that I can find a sequence of 6 when lined up by height (either short to tall or tall to short) also have their names in alphabetical order.

For a slightly harder challenge, show that if I only had 25 students, this would no longer be the case (ie find a pairing of names and heights in which there isn’t 6 in sequential height and name order.)

The Problem of the Week is open to all undergraduate students, regardless of major. Submit your written solution, along with your name and e-mail address, to the Math Department office (Founders Hall Room 2006) by 2:00 p.m. on Friday November 17, 2017. There is a prize of your choice of a $10 gift certificate to either Komal or Barista’s for the best solution.

http://www.unk.edu/academics/math/problem-of-the-fortnight.php