# PROBLEM # 662

**Posted on**: 23 Oct

**Due on**: 30 Oct

Let $a_0, a_1, \ldots, a_n$ be real numbers satisfying

$$\frac{a_0}{1} + \frac{a_1}{2} + \frac{a_2}{3} + \cdots + \frac{a_n}{n+1} = 0.$$

Show that the equation

$$a_0 + a_1 x + a_2 x^2 + \cdots + a_n x^n = 0$$

has at least one real root.

The problem of the week can also be found online here: