

Problem Set 6  
Due Wednesday, November 8.

*Algebra*

Math 110A, Fall Quarter 2017

1. Do problems 4.1.5, 4.1.6, 4.1.11, 4.1.19 in the textbook.
2. Do problems 4.2.5 (a)–(d), 4.2.14 in the textbook.
3. Let  $R$  be a commutative ring with identity. Show that an element of  $R[x]$  is nilpotent if and only if all its coefficients are nilpotent.