

Homework 7

due June 1, 2005 in class

- (1) Artin 13.2.4 (pg. 531)
- (2) Artin 13.3.1 (pg. 531)
- (3) Artin 13.3.8 (pg. 531)
- (4) Artin 13.3.12 (pg. 531)
- (5) Artin 13.3.15 (pg. 531)
- (6) Artin 13.5.1 (pg. 532)
- (7) Let $f(x)$ be an irreducible polynomial of degree n over a field F . Let $g(x)$ be any polynomial in $F[x]$. Prove that every irreducible factor of the composite polynomial $f(g(x))$ has degree divisible by n .