

Name _____

Mathematics 309a: Abstract Algebra

Winter Semester 2009

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Quiz #16

April 7

Suppose $f(x) = x + 3$ and $g(x) = x^2 + 2$ in $\mathbb{Z}_5[x]$. Calculate:

A. $f(x)g(x)$

B. $f(x) + g(x)$

C. $[f(x)]^5$

D. The quotient and remainder when $g(x)$ is divided by $f(x)$ using long division.