

Name _____

Quiz #17
Mathematics 309a Abstract Algebra
April 1, 2008
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Suppose $f(x) = x + 1$ and $g(x) = x^2 + 2$ in $\mathbb{Z}_3[x]$. Calculate:

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

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

C. $[f(x)]^3$

D. $[f(x)]^9$

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