

HW2, due Friday September 25
Math 403, Fall 2011
Patrick Brosnan, Instructor

Reading Assignment

Please read Chapter 2 of Herstein's book through section 2.4.

Writing Assignment

Please work the following problems.

1. (30 points). Herstein page 35 problems 2 and 10.
2. (30 points). Herstein page 36 problems 15, 21 and 22.
3. (20 points) Let G denote the set of real 2×2 matrices

$$\begin{pmatrix} x & y \\ -y & x \end{pmatrix}$$

where $x^2 + y^2 = 1$. Show that G is a group under multiplication.

4. (20 points) Herstein page 46 problems 1 and 2.