McGill University
Math 370A: Algebra III
Assignment 1: due Friday, Sept 19, 1997

1. Text: p. 10, #1.
2. Text: p. 14, #4.
3. Text: p. 36, #5.
4. Text: p. 36, #11.
5. Text: p. 36, #13.
6. Text: p. 36, #15.
7. Text: p. 39, #5.
8. Text: p. 39, #6.
9. Find the group of symmetries of the structure (A, s), where $A = \{1, 2, 3, 4\}$ and
$$s = (\{\{1, 2\}, \{2, 3\}, \{3, 4\}, \{4, 1\}\}, \{\{1, 3\}, \{, 2, 4\}\}) \in \wp^2(A) \times \wp^2(A).$$
10. Use the left regular representation to show that the following multiplication table defines a group structure on $\{a, b, c, d, e, f\}$.

	a	b	c	d	e	f
a	d	e	f	a	b	c
b	c	f	e	b	a	d
c	b	a	d	c	f	e
d	a	b	c	d	e	f
e	f	c	b	e	d	a
f	e	d	a	f	c	b

Is this group isomorphic to the group found in question 9?