

**Date due: October 23, 2017. There will be a quiz on this day.**

I did not teach almost all of the material in Section 3.5 last week, and so I am not asking for Sec. 3.5 question 9 to be handed in on 10/16/17. I don't think that question is terribly difficult, even if I haven't officially defined what  $A_4$  is yet. If you do hand it in, I am going to instruct the grader not to grade it. On the other hand, you don't need to have had a definition of  $A_4$  to do question U, so I think that one is OK.

**Section 3.5** 7\*, 15, 17

**Section 4.1** 2, 4, 10

V. Let  $G$  be the group of *all* isometries of a regular tetrahedron. Show that  $G \cong S_4$ .  
(Hence  $G$  is isomorphic also to the group of rotations of the cube.)

**Section 4.2** 2\*, 7\*, 8\*, 9\*, 14