WRITTEN 6, MATH 369.101

Due: 11/09/2016

(1) Problem 3.1.10 from text.
(2) Problem 3.1.24 from text.
(3) In class we discussed the symmetry group D_3 and were able to describe it as $\langle r, t \mid r^2 = e, t^3 = e, rt = t^2 r \rangle$.

    Find a similar description for D_4. You should explain your answer and what the elements are geometrically (for example, in our discussion about D_3 we had vertices a, b, c of an equilateral triangle and said that r is reflection through the angle bisector at a).

    [Hint: start thinking about rotations and reflections of a square; in the end the group should have 8 elements.]
(4) Problem 2.3.13 from text.