Problem Set 6

From "Dummit & Foote"

1. n. 3, 4 p. 121.

2. n. 11,12,13 p. 122.

Further exercises

3. Determine the Sylow subgroups of D_8 and D_{10}.

4. Determine the Sylow subgroups of A_5.

5. Determine all possible isomorphism classes of groups of order 21.

6. Show that a group of order 56 is not simple.

7. Show that a group of order pq, where p and q are prime and distinct numbers cannot be simple.

8. Let p and q be two prime numbers. Show that there is at most two isomorphism classes of groups of order pq.