

Homework 8
Due in class Thursday, 3/12

Some subset of these exercises will be graded.

Exercises from text:

Section 15: 13 – 15, 30, 31, 37

Section 35: 13, 14, 18, 19

Additional Exercise(s):

1. Prove that every nilpotent group is solvable.
2. Determine the composition factors of \mathbb{Z}_{48} and \mathbb{Z}_{60} (with multiplicity).

Hint(s):

Sections 15 & 35:

- You may use (without proof) the fact that $[G \times G', G \times G'] = [G, G] \times [G', G']$ for any groups G and G' .

Additional Exercise(s):

1. Compare the derived series and descending central series.