

List of required theorems

The page and theorem numbers below refer to my lecture notes. Each of four questions on the exam asks you to prove one of these results. As a general rule, any other earlier theorem, proposition or lemma which is used in a proof needs to be stated clearly but **NEED NOT BE PROVEN**.

Of course, you are recommended to be familiar with the lecture notes in their entirety, because the other four exam questions, each of which requires you to solve a 'problem', assume knowledge of the entire course material. If, in solving any of these problems, you use a result in the lecture notes, it suffices to state this result clearly, and it **NEED NOT BE PROVEN**.

p.8 : Möbius inversion formula.

p.9 : Theorem 4.

p.13 : Theorem 6.

p.17 : Theorem 8.

p.20 : Theorem 11(i).

p.26 : Gauss lemma.

p.28 or p.34 : One or other proof of Gauss reciprocity law. If you choose to learn the first proof, then Gauss lemma may be assumed ; for the latter proof, Theorem 14 may be assumed.

p.32 : Theorem 14.

p.44 : Theorem 17 (you may be asked to prove one of the three parts).

p.55 : Theorem 22.

p.56 : Sats 23.

p.60 : Theorem 25.

p.65 : Theorem 27.

p.69 : Theorem 30.

p.72 : Dirichlets approximationsats.

p.73 : Sats 31.