

Only hand in the starred questions!

Chapter 13, page 131: 5*, 6*, 7, 9, 10*.

Extra question:

- A* Construct the character table of A_4 . Do this by doing the following things: use (without proof) the list of conjugacy classes on page 130. Construct 3 linear characters of A_4 , bearing mind that A_4 has a normal subgroup of order 4 with quotient which is cyclic of order 3. Finally use the facts which appear in Chapter 13 to prove that the degree 3 character shown on page 130 is irreducible. Give a reason to show that you have constructed a complete list of the irreducible characters.