

(7) $(1324), (1243), (2341)$

(a) Γ is a subgroup of A_4 since it has 4 elements and is closed under multiplication.

(b) Since all groups corresponding to the subgroups of A_4 are isomorphic to C_2 or C_3 .

(c) Since A_4 is not simple, it has a normal subgroup of order 4.

