

Given K is subgroup of H

& H is subgroup of G

$$\therefore |K| = 35 \quad \text{and}$$

K is proper subgroup of $H \Rightarrow |K| < |H|$

Lagrange's Theorem states that the order of a subgroup H of finite group G divides the order of G

$\therefore K$ is the proper subgroup H and

$$|K| = 35 \quad \text{so by Lagrange's theorem}$$

the order of K divides the order of H

$$\Rightarrow |H| = 35K ; \text{ for some } \underline{K > 1}$$

So $|H| = 35$ is not possible

beoz K is proper subgroup

of H so $K > 1$