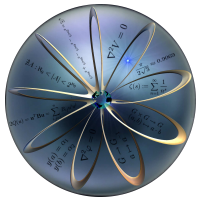

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Čunihin's theorem

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Theorem 1 (Čunihin)**.** *Let G be a finite,* `http://planetmath.org/Seperable`*π-separable group, for some set π of primes. Then*

- *any* `http://planetmath.org/PiGroupsAndPiGroups`*π-subgroup is contained in a* `http://planetmath.org/HallPiSubgroup`*Hall π-subgroup, and*
- *any two Hall π-subgroups are conjugate of one another*

Remarks

1. For $\pi = \{p\}$, this essentially reduces to the Sylow theorems (with unnecessary hypotheses).
2. If G is solvable, it is π-separable for all π, so such subgroups exist for all π. This result is often called Hall's theorem. There is another Hall's theorem, which is similar to this one, can be be found `http://planetmath.org/HallsTheorem2`here.

References

[1] Derek J.S. Robinson. *A Course in the Theory of Groups*, second edition. Springer (1995)