

# Finite Groups with $\mathbb{P}$ -Subnormal Schmidt Subgroups

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**Abstract**—A subgroup  $H$  of a group  $G$  is called  $\mathbb{P}$ -subnormal in  $G$  whenever either  $H = G$  or there is a chain of subgroups

$$H = H_0 \subset H_1 \subset \dots \subset H_n = G$$

such that  $|H_i : H_{i-1}|$  is a prime for every  $i = 1, 2, \dots, n$ . We study the structure of a finite group  $G$  all of whose Schmidt subgroups are  $\mathbb{P}$ -subnormal. The obtained results complement the answer to Problem 18.30 in the *Kourovka Notebook*.

**Keywords:** finite group,  $\mathbb{P}$ -subnormal subgroup, Schmidt subgroup, saturated Fitting formation.

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