

**عنوان مقاله:**

Some criteria for solvability and supersolvability

**محل انتشار:**

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**خلاصه مقاله:**

Denote by  $G$  a finite group, by  $\{\text{rm hsn}\}(G)$  the harmonic mean Sylow number (eliminating the Sylow numbers that are one) in  $G$  and by  $\{\text{rm gsn}\}(G)$  the geometric mean Sylow number (eliminating the Sylow numbers that are one) in  $G$ . In this paper, we prove that if either  $\{\text{rm hsn}\}(G) < \frac{45}{Y}$  or  $\{\text{rm gsn}\}(G) < \sqrt[3]{\frac{300}{Y}}$ , then  $G$  is solvable. Also, we show that if either  $\{\text{rm hsn}\}(G) < \frac{24}{Y}$  or  $\{\text{rm gsn}\}(G) < \sqrt{\frac{12}{Y}}$ , then  $G$  is supersolvable

**کلمات کلیدی:**

Finite group, Sylow subgroup, solvable groups

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