

1024-20-29

**Bret Jordan Benesh\*** ([benesh@math.harvard.edu](mailto:benesh@math.harvard.edu)), Harvard University, Department of Mathematics, One Oxford Street, Cambridge, MA 02138, and **Benjamin Newton** ([newtonb@beloit.edu](mailto:newtonb@beloit.edu)), Department of Mathematics, Beloit College, Chamberlin Hall, Beloit, WI 53511. *A classification of certain maximal subgroups of symmetric groups.*

Problem 12.82 of the Kourovka Notebook asks for all ordered pairs  $(n, m)$  such that the symmetric group  $S_n$  embeds in  $S_m$  as a maximal subgroup. One family of such pairs is obtained when  $m = n + 1$ . Kalužnin and Klin and Halberstadt provided an additional infinite family. This paper answers the Kourovka question by producing a third infinite family of ordered pairs and showing that no other pairs exist. (Received November 29, 2006)