



The maximal subgroups of the symmetric group

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Abstract. In this survey paper I will talk about the classification of the maximal subgroups of the symmetric group of degree n , which can be divided into three main categories: intransitive, imprimitive and primitive maximal subgroups. The O’Nan-Scott theorem and its proof will be discussed. The content of this paper was inspired by two courses I gave, one was a minicourse given in December 2018 in the University of Campinas (state of S.Paulo, Brazil) during the brazilian Escola de Álgebra 2018, the other was an online PhD course given in November 2020 for the University of Padova (Italy). This paper is structured as lecture notes, in particular it contains exercises for the reader.