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Nota di contenuto	Some basic observations -- Preliminaries -- Enumerating p-groups: a lower bound -- Enumerating p-groups: upper bounds -- Some more preliminaries -- Group extensions and cohomology -- Some representation theory -- Primitive soluble linear groups -- The orders of groups -- Conjugacy classes of maximal soluble subgroups of symmetric groups -- Enumeration of finite groups with abelian Sylow subgroups -- Maximal soluble linear groups -- Conjugacy classes of maximal soluble subgroups of the general linear groups -- Pyber's theorem: the soluble case -- Pyber's theorem: the general case -- Enumeration within varieties of abelian groups -- Enumeration within small varieties of A-groups -- Enumeration within small varieties of p-groups.

Sommario/riassunto

How many groups of order n are there? This is a natural question for anyone studying group theory, and this Tract provides an exhaustive and up-to-date account of research into this question spanning almost fifty years. The authors presuppose an undergraduate knowledge of group theory, up to and including Sylow's Theorems, a little knowledge of how a group may be presented by generators and relations, a very little representation theory from the perspective of module theory, and a very little cohomology theory - but most of the basics are expounded here and the book is more or less self-contained. Although it is principally devoted to a connected exposition of an agreeable theory, the book does also contain some material that has not hitherto been published. It is designed to be used as a graduate text but also as a handbook for established research workers in group theory.