

Preface

I wrote most of these worksheets while teaching at an English grammar (i.e. selective) school. Each sheet was motivated by a need felt at the time, to address inadequacies in text book exercises, to deal with new syllabus topics, or simply to follow out some idea. (Two or three have been written more recently for this collection.) They do not comprehensively cover any syllabus, but are provided as a resource to supplement textbooks and other available materials.

The sheets were written for class use in a selective school, so many of them include some fairly routine work, but most also have some hard questions to provide a challenge for the really able, who can get very frustrated when all the work they are given is easy. I have tried to provide guidance in the answer section to help with the hardest questions.

The sheets are classified into four sections: A for algebra and arithmetic, G for geometry, S for statistics, X for extra investigations. The biggest section is G: it just happened that way! (For the 16–18 age range I wrote a lot of statistics sheets, which I hope, God willing, to put together, with some notes on teaching the subject, in due course.)

Sheet G9 on Calculating π has appeared previously in *Mathematics in School*.

I am grateful to my publisher Andrew Griffin for giving much encouragement that spurred me on to do the considerable work involved in preparing the sheets for publication; and also to Jane Adams, the designer, who collaborated with great patience and efficiency in the layout of the final versions of the sheets.

Special thanks are due to my friend George Noble, who used his artistic gifts to produce far better diagrams than I could, as well as helping with the typing. He also, following an idea suggested by Mark Robins, produced the very politically incorrect cover design!

Last but not least, thanks to my wife Cynthia for her longsuffering during all this work, and for help with the checking. Any remaining errors are of course my responsibility. If you discover some and email me, cwpuritz@pmbx.net, I will be grateful, and will respond by sending you details of any other errors that have been found.

I hope you and your pupils will enjoy the venture!

Christian Puritz
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