



QUESTION WORKBOOK

Combinatorics

Further Pure 2 · Year FM

6 questions · 20 marks

NAVY SCREEN EDITION

SECTION A · Warm-up

- A1** From 10 different letters, how many ordered strings of 4 can be made, and how many unordered selections of 4? [3]

- A2** In how many ways can 8 people be seated round a circular table, if only their positions relative to each other matter? [2]

SECTION B · Standard

- B1** How many distinct arrangements are there of the letters of STATISTICS? [3]

- B2** A committee of 5 is chosen from 5 women and 7 men. How many committees contain at least 2 women? [4]

- B3** How many integers from 1 to 500 inclusive are divisible by 3 or by 5? [3]

SECTION C · Stretch

- C1** Show that a set of 10 elements has exactly 512 subsets with an even number of elements. [5]