



QUESTION WORKBOOK

Sampling and the large data set

Statistics · Year 12–13

7 questions · 23 marks

NAVY SCREEN EDITION

SECTION A · Warm-up

A1 Define the terms population, census and sample. [3]

A2 State what is needed before a simple random sample can be taken, and the property every member must have. [2]

SECTION B · Standard

B1 A college has 720 first-year and 480 second-year students. Describe how to take a sample of 50, stratified by year group. [4]

B2 Describe how to take a systematic sample of 60 from a payroll list of 1200 workers. [3]

- B3** A researcher stands outside a gym at 7 am and questions people about their exercise habits. Name this sampling method and explain the bias. [3]

SECTION C · Stretch

- C1** A student calculates the mean daily rainfall at Heathrow over May to October 2015 from the large data set, and concludes that rainfall across the UK is increasing. Give two reasons why the conclusion is unsafe, and state how values recorded as tr and n/a should be treated. [5]

- C2** A survey about internet reliability is run entirely through an online form. Explain the sampling problem, and its likely effect on the results. [3]
