

**STATISTICS (Q 7, PAPER 2)**

**1999**

- 7 (a) Four people have a meal in a restaurant. The average cost of the meal per person is IR£12.50, excluding the service charge.  
What is the total bill for the four people if a 10% service charge is added?

- (b) The cumulative frequency table below shows the distribution of ages of 110 people living in an estate.

Age in years	$\leq 5$	$\leq 10$	$\leq 20$	$\leq 35$	$\leq 50$	$\leq 60$
Number of people	5	15	40	90	105	110

- (i) Draw the cumulative frequency curve, putting number of people on the vertical axis.
- (ii) Use your curve to estimate the median age.
- (iii) Use your curve to estimate the number of people who are more than 15 years of age.

- (c) The number of minutes taken by 20 pupils to answer a short question is shown in the following distribution table:

Minutes	2 - 4	4 - 6	6 - 8	8 - 10
Number of pupils	6	9	4	1

By taking the data at mid-interval values, calculate

- (i) the mean number of minutes taken per pupil
- (ii) the standard deviation, correct to one place of decimals.

**ANSWERS**

- 7 (a) £55
- (b) (ii) 24                      (iii) 84
- (c) (i) 5                            (ii) 1.7