STATISTICS (Q 7, PAPER 2)

2001

7   (a) (i) Calculate the mean of the following numbers
$$2, 3, 5, 7, 8.$$

   (ii) Hence, calculate the standard deviation of the numbers correct to one decimal place.

   (b) The following table shows the distribution of the amounts spent by 40 customers in a shop:

Amount Spent (IR£)	0 - 8	8 - 12	12 - 16	16 - 20	20 - 32
Number of Customers	2	9	13	10	6

   [Note: IR£8 - IR£12 means IR£8 or over but less than IR£12 etc.]

   (i) Taking mid-interval values, estimate the mean amount spent by the customers.

   (ii) Copy and complete the following cumulative frequency table:

Amount Spent (IR£)	< 8	< 12	< 16	< 20	< 32
Number of Customers					

   (iii) Draw a cumulative frequency curve (ogive).

   (iv) Use your curve to estimate the number of customers who spent IR£25 or more.

ANSWERS

7   (a) (i) 5   (ii) 2.3
   (b) (i) £15.40
      (ii)

Amount Spent (IR£)	< 8	< 12	< 16	< 20	< 32
Number of Customers	2	11	24	34	40

      (iv) 3