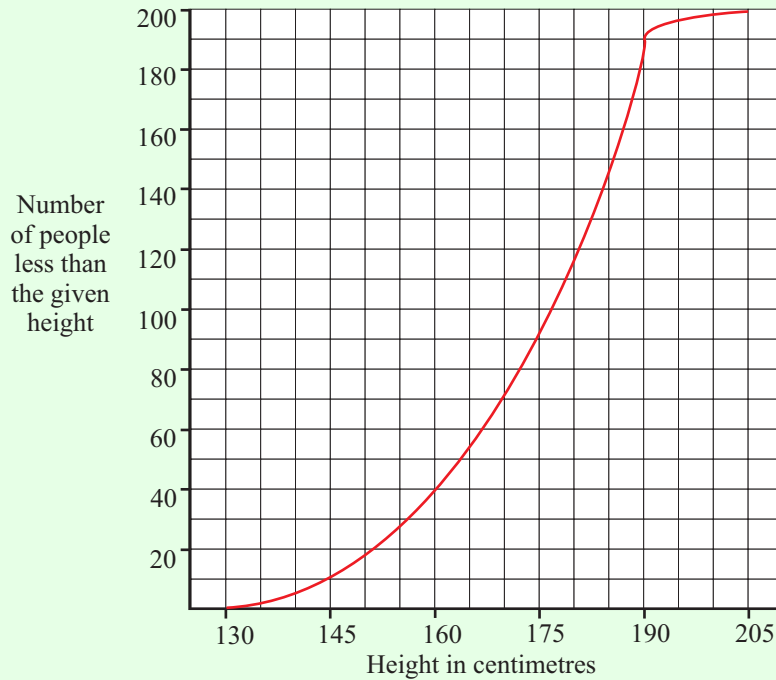## STATISTICS (Q 7, PAPER 2)

2003

7 (a) The heights of 200 people are recorded to the nearest centimetre. The results are represented by the ogive below.

Height in centimetres

(i) Copy the cumulative frequency table below and use the ogive to complete it.

Height	<130	<145	<160	<175	<190	<205
Number of people	0					

(ii) Hence, copy and complete the following grouped frequency table:

Height	130-144	145-159	160-174	175-189	190-204
Number of people					

(iii) Using your grouped frequency table, and taking mid-interval values, find an estimate of the mean height.

(iv) Use the ogive to estimate the number of people who are taller than the mean.

(b) (i) The mean of the following five numbers is 10. Find the standard deviation of the numbers.

7, 9, 10, 11, 13.

(ii) The mean of the following five numbers is also 10. Find the standard deviation of these numbers.

5, 7, 9, 13, 16.

(iii) What does comparing the two standard deviations tell you about the two sets of numbers?

ANSWERS

7   (a) (i)

Height	<130	<145	<160	<175	<190	<205
Number of people	0	10	40	90	190	200

(ii)

Height	130-144	145-159	160-174	175-189	190-204
Number of people	10	30	50	100	10

(iii) 172.25   (iv) 120

(b) (i) 2   (ii) 4