2 A student measures the upper arm lengths of a sample of 97 women. The results are summarised in the frequency table in Fig. 2.1.

Arm length in cm	30 –	31 –	32 –	33 –	34 –	35 –	36 –	37 –	38 –	39 –	40 – 41
Frequency	1	4	5	9	13	19	17	17	4	3	5

Fig. 2.1

The student constructs two cumulative frequency diagrams to represent the data using different class intervals. These are shown in Fig. 2.2 opposite.

One of these diagrams is correct and the other is incorrect.

(a) State which diagram is incorrect, justifying your answer. [2]

(b) Use the correct diagram in Fig. 2.2 to find an estimate of the median. [1]
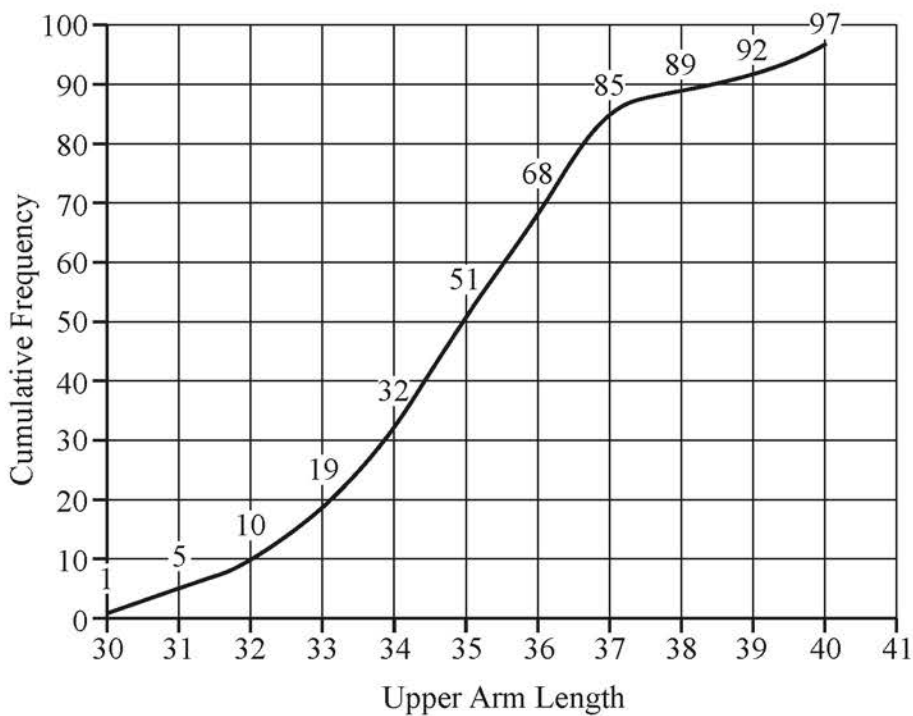
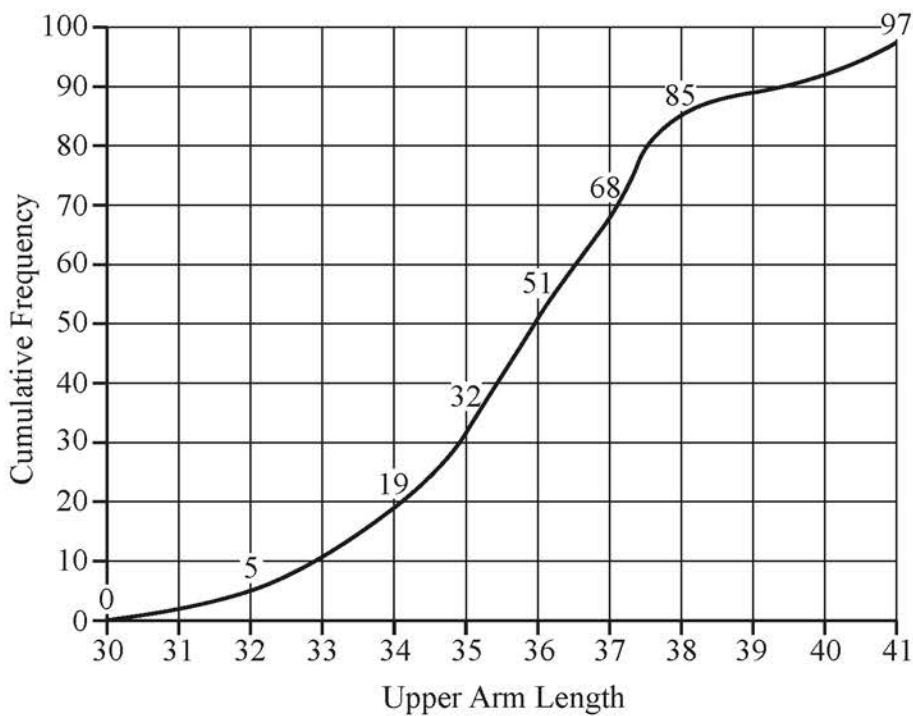Upper Arm Length of Women

Diagram A

Upper Arm Length of Women

Diagram B

Fig. 2.2