Q1.   The table shows the number of televisions sold each month by a shop.

Month	April	May	June	July	Aug	Sept	Oct
Number of televisions	163	100	118	99	63	92	74

(a)   Work out the four-point moving averages for this information.
The first three have been worked out for you.

.........120........   ....95.........   ....93.........   ....

(2)

(b)   Use the moving averages to describe the trend.

....
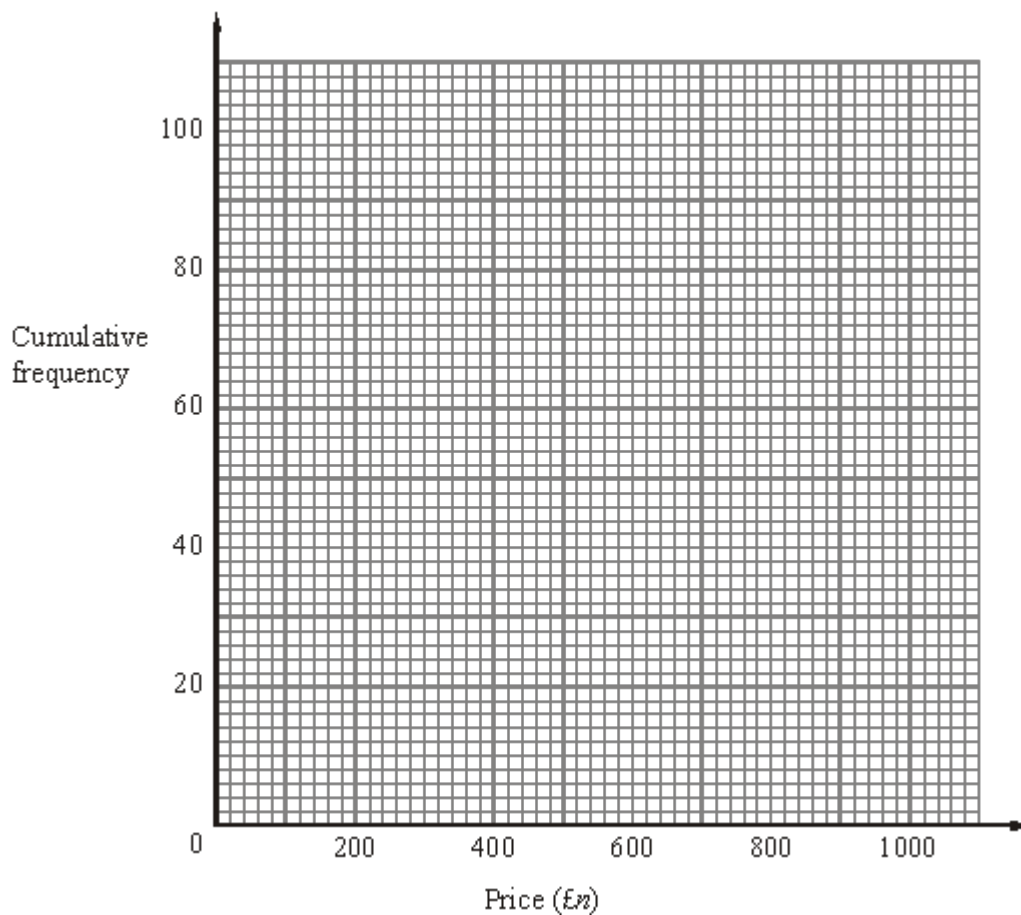
(1)

The **cumulative frequency** table shows information about the prices, in £, of 100 televisions.

Price (£n)	Cumulative frequency
$0 < n \leq 200$	5
$0 < n \leq 400$	20
$0 < n \leq 600$	40
$0 < n \leq 800$	75
$0 < n \leq 1000$	100

(c)   On the grid below, draw a cumulative frequency graph for the table.

(2)

(d)   Use your graph to find an estimate for the median price of these televisions.

£ ....

(1)
(Total 6 marks)

M1.

	Working	**Answer**	**Mark**	**Additional Guidance**
(a)		82	2	**M1** for (99 + 63 + 92 + 74) –r- 4 or 328 ÷ 4 **A1** cao
(b)		Decreasing	1	**B1** for decreasing oe
(c)	Heights = 5, 20, 40, 75, 100	Correct cumulative frequency graph	2	**B2** for fully correct cumulative frequency graph (Ignore any part of graph outside range of points) (**B1** for 4 or 5 points plotted correctly ±1 full (2mm) square at the end of interval or for 4 or 5 points plotted not at end but consistent within each interval and joined)
(d)		640 – 680	1	**B1** for 640 – 680 or ft (dep on graph being cf) for reading from graph at 50+ 1 full (2mm) square
				Total for Question: 6 marks

E1.   Many candidates were not aware of how to find the last moving average in (a). By far the most common error was to find a three-point moving average, with some candidates even finding the average of the moving averages given.

In part (b) many candidates did not understand what was required and commented on the number of televisions sold each month. All that was required was to say that the trend was decreasing yet many went into great detail about every number in the table. In parts (a) and (b) 29% of the candidates scored all 3 marks with a further 44% scoring 2 marks. 20% of the candidates scored no marks at all.

Many candidates were successful in parts (c) and (d) with 38% scoring all 3 marks and a further 20% scoring two marks. Quite a few candidates plotted the cumulative frequency values at 100, 200, 300, 400 and 500 thinking that the points needed to be plotted at the midpoints of the price intervals, clearly not understanding the question.

Some of these candidates did, however, go on and earn the mark in (d) for correctly reading from their graph. Some plotted the points in the correct position but then failed to join the points whilst others plotted the points correctly but then proceeded to draw a line of best fit. Nearly 20% of the candidates scored no marks at all on the final two parts of the question.