Moving average

1. Work out the 3-point moving averages for the information.

July	August	September	October	November	December
248	255	235	260	261	298

The first one has been worked out for you.

246,_____,_____,_____

2. Work out the 4-month moving averages for this information.

July	August	September	October	November	December
340	352	336	272	256	264

The first one has been worked out for you.

325,_____,_____,_____

3. The table shows the number of orders received each month by a small company. Work out all 4-month moving averages for this data.

Month	Jan	Feb	Mar	Apr	May	June	July	Aug
Order	23	31	15	11	19	16	20	13

_____,_____,_____,_____

4. Jasmine sells soft drinks . she recorded the number of drinks she sold from July to December . The table show s this information.

July	August	September	October	November	December
342	337	375	402	394	381

Work out all 3- months moving averages for this information .

_____,_____,_____,_____

5) The table shows the number of vacuum cleaners sold by a shop in each of the first five
months of 2010

Month	Jan	Feb	Mar	Apr	May
Vacuum Cleaner sold	23	35	42	53	29

Work out the 3-month moving averages for this information.
The first one has been done for you.

33, _____, _____,

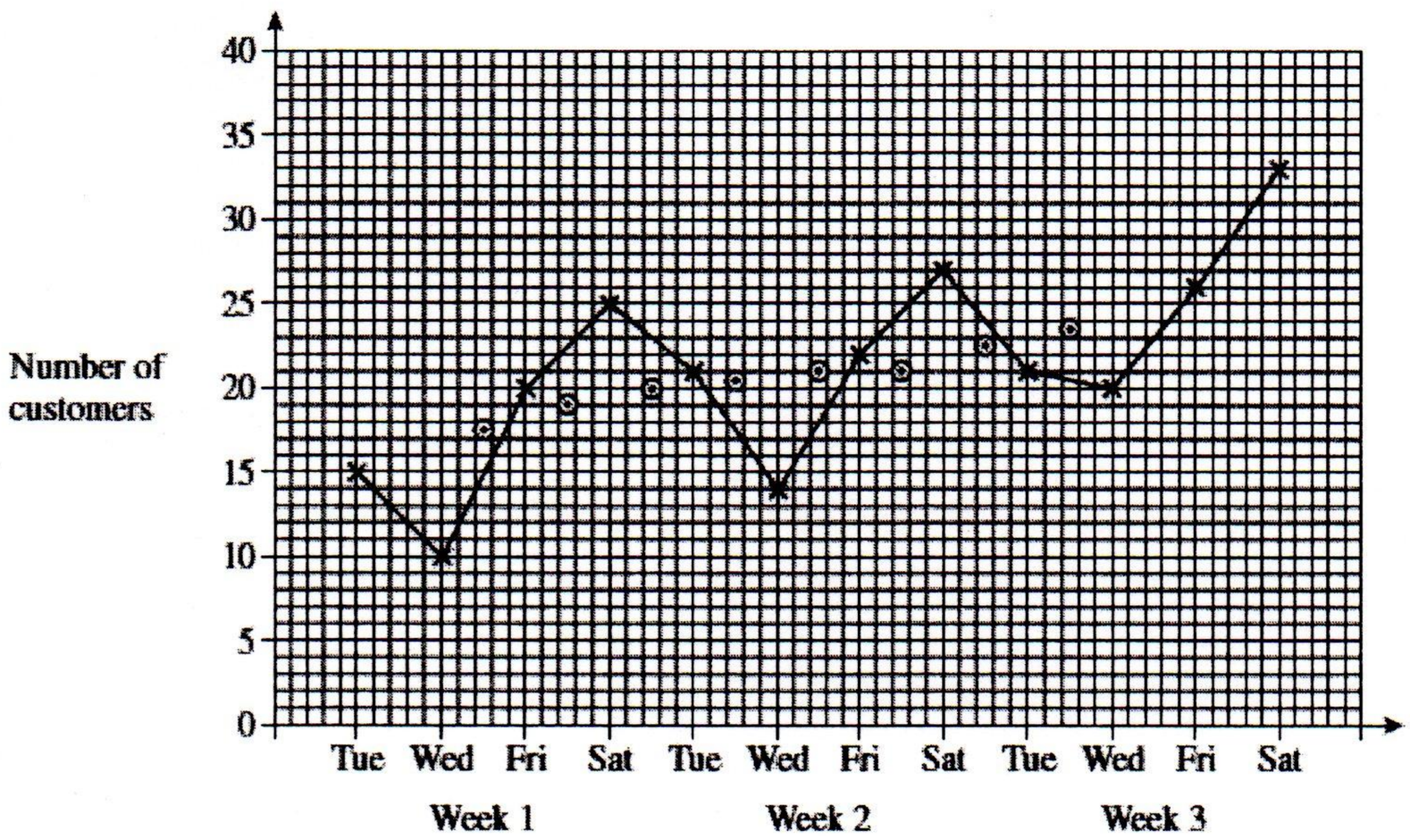
6) Julie is a hairdresser. Her shop is open Tuesday, Wednesday, Friday and Saturday each week. The number of customers at her shop each day over a period of 3 weeks is shown in the table.

Week	Day	Number of customers
1	Tuesday	15
	Wednesday	10
	Friday	20
	Saturday	25
2	Tuesday	21
	Wednesday	14
	Friday	22
	Saturday	27
3	Tuesday	21
	Wednesday	20
	Friday	26
	Saturday	33

Julie wants to know how her business is performing.

a) Explain why a four-point moving average would be appropriate for Julie to use.

b) The graph shows the raw data ( ) and some of the four-point moving averages ( ).



(i) The last four-point moving average is **not** plotted.
Use the table to calculate this moving average and plot it on the graph.
You **must** show your working.

Answer .....

(ii) Use a trend line to find the next moving average.
Hence calculate a prediction of the number of customers on the Tuesday of week 4.
You **must** show your working.

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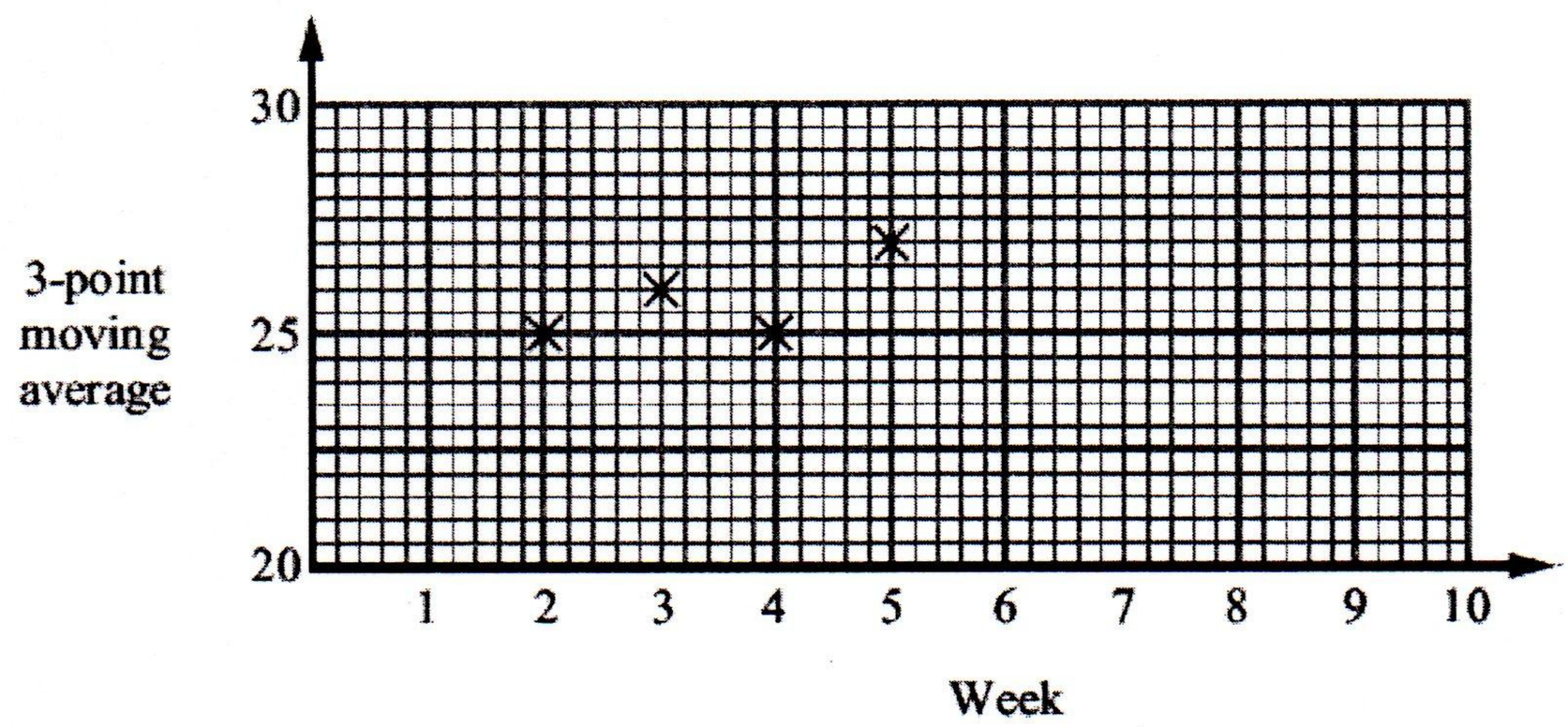
7) The table shows the number of pupils at a dance class each week for 10 weeks.
The table also shows seven of the 3-point moving averages.

Week	1	2	3	4	5	6	7	8	9	10
Number of Pupils	23	25	27	26	22	33	23	25	30	29
3-point moving average		25	26	25	27	26	27	26		

(a) Work out the missing 3-point moving average.
Write your answer in the table.
(b) On the grid, plot the 3-point moving averages from the table.
The first four have been plotted for you.



(c) On the grid, draw a trend line.

(d) Comment on the trend shown by your graph.

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