

Start in Spreadsheet.

Tap **File, New**.

Enter the time series data shown.

	A	B	C
1	1	560	
2	2	624	
3	3	580	
4	4	420	
5	5	520	
6	6	600	
7	7	564	
8	8	396	
9	9	496	
10	10	600	
11	11	560	
12	12	380	
13	13	480	
14	14	588	

Graph the data to determine the type of moving average.

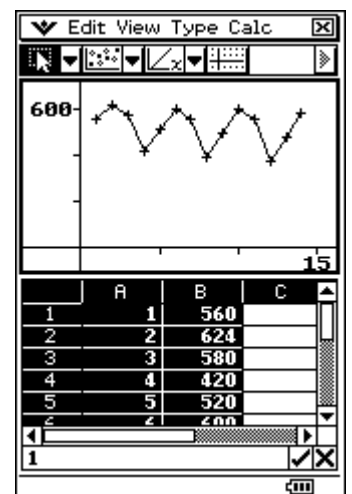
Select columns A and B.

Tap **Graph, Scatter**.

Tap **View, Lines**.

A four-point centred moving average looks appropriate.


Resize the data window.



Select cells A3 to A12 and tap **Edit, Copy**.*

Tap into cell C3 and tap **Edit, Paste**.*

Tap into cell D3 and enter the 4-point moving average formula.

Tap on  to check.

Resize the data window.

	C	D	E
1			
2			
3	3	541	
4	4		
5	5		
6	6		

D3 Value: 541

D3 Formula:
$$\frac{B1}{2} + B2 + B3 + B4 + \frac{B5}{2}$$

4

D3 541

* Classpad will only graph adjacent columns of data, so we need to copy these time values for later use in order to graph columns C v D.

Select cells D3 to D12.

Tap **Edit**, **Fill Range** and tap **OK**.

	C	D	E
1			
2			
3	3	541	
4	4	533	
5	5	528	
6	6	523	
7	7	517	
8	8	514	
9	9	513.5	
10	10	511	
11	11	507	
12	12	503.5	
13			
14			

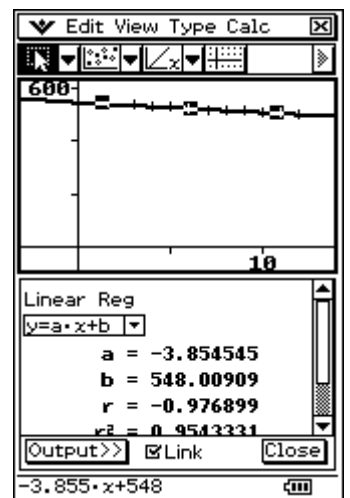
Select columns C and D.

Tap **Graph**, **Scatter**.

Tap **Calc**, **Linear Reg** to obtain the regression line.

Note the coefficients for later use or tap **Output>>** and store the coefficients within the spreadsheet.

Return to the data window.



Tap into cell E3 and enter the formula **=B3-D3** to calculate the residual.

Select cells E3 to E12.

Tap **Edit**, **Fill Range** and tap **OK**.

The residuals may be required when making a prediction.

	D	E	F
1			
2			
3	541	39	
4	533	-113	
5	528	-8	
6	523	77	
7	517	47	
8	514	-118	
9	513.5	-17.5	
10	511	89	
11	507	53	
12	503.5	-123.5	
13			
14			

Tap **Main**.

The calculation to predict the data value for $t = 16$ is shown.

$$-3.854545 \times 16 + 548.00909 = 486.33637$$

$$486.33637 - 113 - 118 - 123.5 = 368.166667$$