```
1387  0  OUTPUT ACTIVATE WeightedMovingAverageOutput.
1387  0 M>  OUTPUT ACTIVATE WeightedMovingAverageOutput.
1388  0  TITLE 'Weighted Moving Average'.
1388  0 M>  TITLE 'Weighted Moving Average'.
```

```
1389  0  GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\N Time Series Tests and Fo
recasting\Weighted Moving Average\dataset.csv' /ENCODI
            NG='UTF8' /DELCASE=LINE /DELIMITERS=',' /QUALIFIER='"' /ARRANGEMEN
T=DELIMITED /FIRSTCASE=2
1389  0 M>  GET DATA /TYPE=TXT /FILE='D:\DATA ANALYSIS\N Time Series Tests and
 Forecasting\Weighted Moving Average\dataset.csv' /ENC
              ODING='UTF8' /DELCASE=LINE /DELIMITERS=',' /QUALIFIER='"' /ARRA
NGEMENT=DELIMITED /FIRSTCASE=2
1390  0   /VARIABLES=school A8 sex A8 age F8.0 address A8 famsize A8 Pstatus A
8 Medu F8.0 Fedu F8.0 Mjob A16 Fjob A16 reason A16 gua
            rdian A16 traveltime F8.0 studytime F8.0 failures F8.0 schoolsup A
8 famsup A8 paid A8 activities A8 nursery A8 higher A8
             internet A8 romantic A8 famrel F8.0 freetime F8.0 goout F8.0 Dalc
 F8.0 Walc F8.0 health F8.0 absences F8.0 G1 F8.0 G2 F
            8.0 G3 F8.0.
1390  0 M>   /VARIABLES=school A8 sex A8 age F8.0 address A8 famsize A8 Pstatu
s A8 Medu F8.0 Fedu F8.0 Mjob A16 Fjob A16 reason A16
              guardian A16 traveltime F8.0 studytime F8.0 failures F8.0 schoo
lsup A8 famsup A8 paid A8 activities A8 nursery A8 hig
              her A8 internet A8 romantic A8 famrel F8.0 freetime F8.0 goout
F8.0 Dalc F8.0 Walc F8.0 health F8.0 absences F8.0 G1
              F8.0 G2 F8.0 G3 F8.0.
1391  0  DATASET NAME WeightedMovingAverageData.
1391  0 M>  DATASET NAME WeightedMovingAverageData.
1392  0  COMPUTE time_index=$CASENUM.
1392  0 M>  COMPUTE time_index=$CASENUM.
1393  0  EXECUTE.
1393  0 M>  EXECUTE.
1394  0  * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
1394  0 M>  * BEGIN METHOD-SPECIFIC SPSS WORKFLOW.
1395  0  COMPUTE weighted_ma5=(G3+2*LAG(G3)+3*LAG(G3,2)+4*LAG(G3,3)+5*LAG(G3,4
))/15.
1395  0 M>  COMPUTE weighted_ma5=(G3+2*LAG(G3)+3*LAG(G3,2)+4*LAG(G3,3)+5*LAG(G
3,4))/15.
1396  0  COMPUTE weighted_error=G3-weighted_ma5.
1396  0 M>  COMPUTE weighted_error=G3-weighted_ma5.
1397  0  DESCRIPTIVES VARIABLES=weighted_ma5 weighted_error /STATISTICS=MEAN S
TDDEV MIN MAX.
```

```
1397  0 M>  DESCRIPTIVES VARIABLES=weighted_ma5 weighted_error /STATISTICS=MEA
N STDDEV MIN MAX.
```

Descriptives

Notes

Output Created		18-JUL-2026 15:54:49
Comments		
Input	Data	D:\DATA ANALYSIS\N Time Series Tests and Forecasting\Weighted Moving Average\dataset.csv
	Active Dataset	WeightedMovingAverageData
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	649
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=weighted_ma5 weighted_error /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

```
[WeightedMovingAverageData]
```

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
weighted_ma5	645	5.07	17.07	11.9115	2.04125
weighted_error	645	-15.27	10.47	-.0061	3.10201
Valid N (listwise)	645				

```
1398  0  ECHO 'Weights one through five are shown explicitly and sum to fiftee
n'.
1398  0 M>  ECHO 'Weights one through five are shown explicitly and sum to fif
teen'.
Weights one through five are shown explicitly and sum to fifteen
1399  0  * END METHOD-SPECIFIC SPSS WORKFLOW.
1399  0 M>  * END METHOD-SPECIFIC SPSS WORKFLOW.
1400  0  SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecasting\We
ighted Moving Average\SPSS_Output\sav\weighted-moving-
            average_spss_ready_data.sav' /COMPRESSED.
1400  0 M>  SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecasting
\Weighted Moving Average\SPSS_Output\sav\weighted-movi
               ng-average_spss_ready_data.sav' /COMPRESSED.
1401  0  ECHO 'Weighted Moving Average'.
1401  0 M>  ECHO 'Weighted Moving Average'.
Weighted Moving Average
1402  0  ECHO 'Method type: smoothing_method'.
1402  0 M>  ECHO 'Method type: smoothing_method'.
Method type: smoothing_method
1403  0  ECHO 'Design: Five-observation trailing weighted moving average with
weights 1,2,3,4,5 from oldest to newest.'.
1403  0 M>  ECHO 'Design: Five-observation trailing weighted moving average wi
th weights 1,2,3,4,5 from oldest to newest.'.
Design: Five-observation trailing weighted moving average with weights 1,2,3,4
,5 from oldest to newest.
1404  0  ECHO 'Formula: WMA_t=(1*y_(t-4)+2*y_(t-3)+3*y_(t-2)+4*y_(t-1)+5*y_t)/
15'.
1404  0 M>  ECHO 'Formula: WMA_t=(1*y_(t-4)+2*y_(t-3)+3*y_(t-2)+4*y_(t-1)+5*y_
t)/15'.
Formula: WMA_t=(1*y_(t-4)+2*y_(t-3)+3*y_(t-2)+4*y_(t-1)+5*y_t)/15
1405  0  ECHO 'Series order: source-row order'.
1405  0 M>  ECHO 'Series order: source-row order'.
Series order: source-row order
1406  0  ECHO 'window = 5'.
1406  0 M>  ECHO 'window = 5'.
window = 5
1407  0  ECHO 'weight_sum = 1.0'.
1407  0 M>  ECHO 'weight_sum = 1.0'.
weight_sum = 1.0
```

```
1408  0  ECHO 'newest_weight = 0.3333333333333333'.
1408  0 M>  ECHO 'newest_weight = 0.3333333333333333'.
newest_weight = 0.3333333333333333
1409  0  ECHO 'smoothed_points = 645'.
1409  0 M>  ECHO 'smoothed_points = 645'.
smoothed_points = 645
1410  0  ECHO 'last_weighted_average = 10.933333333333332'.
1410  0 M>  ECHO 'last_weighted_average = 10.933333333333332'.
last_weighted_average = 10.933333333333332
1411  0  ECHO 'smoothing_mae = 1.590801033591731'.
1411  0 M>  ECHO 'smoothing_mae = 1.590801033591731'.
smoothing_mae = 1.590801033591731
1412  0  ECHO 'smoothing_rmse = 2.2033957036913843'.
1412  0 M>  ECHO 'smoothing_rmse = 2.2033957036913843'.
smoothing_rmse = 2.2033957036913843
1413  0  ECHO 'Cross-check status: pass'.
1413  0 M>  ECHO 'Cross-check status: pass'.
Cross-check status: pass
1414  0  OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Forecas
ting\Weighted Moving Average\SPSS_Output\spv\weighted-
            moving-average_spss_output.spv'.
1414  0 M>  OUTPUT SAVE OUTFILE='D:\DATA ANALYSIS\N Time Series Tests and Fore
casting\Weighted Moving Average\SPSS_Output\spv\weight
               ed-moving-average_spss_output.spv'.
1415  0  OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=PRI
NTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\N Time S
            eries Tests and Forecasting\Weighted Moving Average\SPSS_Output\pd
f\weighted-moving-average_spss_output.pdf'.
1415  0 M>  OUTPUT EXPORT /CONTENTS EXPORT=ALL LAYERS=PRINTSETTING MODELVIEWS=
PRINTSETTING /PDF DOCUMENTFILE='D:\DATA ANALYSIS\N Tim
               e Series Tests and Forecasting\Weighted Moving Average\SPSS_Out
put\pdf\weighted-moving-average_spss_output.pdf'.
```