

Answer on Question #79668 – Math – Statistics and Probability

Question

1. What is time series analysis

2. What is the moving averages system of forecasting

week	1	2	3	4	5	6	7	8
no of bags	340	330	323	343	350	345	365	324

Calculate three week moving averages and six weeks moving averages

Solution

1. What is time series analysis

Answer: Time series analysis is a statistical technique that deals with time series data, or trend analysis. Time series data means that data is in a series of particular time periods or intervals.

2. What is the moving averages system of forecasting

Answer: If the forecast for the next month's data say July was actual data for June, then the forecasts obtained would fluctuate up and down with every random fluctuation. If the forecast for next month's data was the average of sales for several preceding months then, hopefully, the random fluctuations would cancel each other out, i.e. would be smoothed away.

week	1	2	3	4	5	6	7	8
no of bags	340	330	323	343	350	345	365	324

Calculate three week moving averages and six weeks moving averages.

Three week moving averages:

Week	Calculation
4	$(340+330+323)/3 = 331.0$
5	$(330+323+343)/3 = 332.0$
6	$(323+343+350)/3 = 338.7$
7	$(343+350+345)/3 = 346.0$
8	$(350+345+365)/3 = 353.3$

Six week moving averages:

Week	Calculation
7	$(340+330+323+343+350+345)/6 = 338.5$
8	$(330+323+343+350+345+365)/6 = 342.7$

The results are in the next table

week	no of bags	three week moving averages	six weeks moving averages
1	340	-	-
2	330	-	-
3	323	-	-
4	343	331.0	-
5	350	332.0	-
6	345	338.7	-
7	365	346.0	338.5
8	324	353.3	342.7