

Time Series

Time series

A time series is a sequence of counts or measurements, for example

- births day by day at a hospital
- yearly rain fall in a given location
- monthly sales at a selected store
- a closing stock price each business day

Trend

- The term *trends* implies a change over time.
- Quantitative forecasting:
- It involves analyzing time-series data, and then predicting what the future might be.

GASOLINE SALES TIME SERIES

Week	Sales (1000s of gallons)
1	17
2	21
3	19
4	23
5	18
6	16
7	20
8	18
9	22
10	20
11	15
12	22

- The number of gallons of gasoline sold by a gasoline distributor in Bennington, Vermont, over the past 12 weeks.
- The average value or mean for this time series is 19.25 or 19,250 gallons per week.
- Note how the data fluctuate around the sample mean of 19,250 gallons.
- Time series plot for these data.

GASOLINE SALES TIME SERIES PLOT

