

IE 375 Section 01 - Recitation 1 Questions

Question 1:

A car dealer is forecasting the demand for its car sales of a particular brand. The sales for the first 7 months are as follows:

Month	4	5	6	7
Sales	100	105	110	112

The dealer uses single exponential smoothing with $\alpha=0.2$.

- Calculate the forecasts for months 5-7 using the initial value $F_{3,4} = 95$. Note that you start by observing the demand at Month 4, forecast for Month 5, observe for month 5, and so on.
- What are the one-period forecast errors for months 4-7?
- What is MAD value over the months 4-7?
- What is the forecast for month 8? Month 9? Month 10?
- Is this forecasting method an appropriate forecasting method for this data? If not, which forecasting methods will you recommend?
- The dealer found out that out of the past 121 days (4 months), it did not have any inventory of this particular brand for 25 days. Explain how this would (should) impact the forecast?

Question 2:

Question from Chapter 2 of your text-book. (Section 2.6, Problem 12, both editions)

A simple forecasting method for weekly sales of DVD drives used by a local computer dealer is to form the average of the two most recent sales figures.

Suppose sales for the drives for the past 12 weeks were

Week:	1	2	3	4	5	6	7	8	9	10	11	12
Sales:	86	75	72	83	132	65	110	90	67	92	98	73

- Determine the one-step-ahead forecasts made for periods 3 through 12 using this method.
- Determine the forecast errors for these periods.
- Compute the MAD, the MSE, and the MAPE based on the forecast errors computed in part (b).