salesforce composite. Meanwhile, operations makes a forecast of sales based on past data, trends, and seasonal components. The operations forecast usually turns out to be an increase over last year but still 20 percent less than the forecast of the marketing department. How should forecasting in this company be done?

PROBLEMS

1. In the Atlanta area, the number of daily calls for repair of Speedy copy machines has been recorded as follows:

October	Calls
1	92
2	127
3	103
4	185
5	132
6	111
7	174
8	97

   a. Prepare a three-period moving-average forecast for the data. What is the error on each day?
   b. Prepare a three-period weighted-moving-average forecast using weights of $w_1 = .5$, $w_2 = .3$, $w_3 = .2$.
   c. Which of these two forecasts is better?

2. The ABC Floral Shop sold the following number of geraniums during the last 2 weeks.

Day	Demand	Day	Demand
1	200	8	150
2	134	9	182
3	157	10	197
4	165	11	136
5	177	12	163
6	125	13	157
7	146	14	189

   a. Calculate a forecast of the above demand using a three- and five-period moving average.
   b. Plot these forecasts and the original data on graph paper.
   c. Which of the above forecasts is the best? Why?

3. The Handy-Dandy Department Store had forecast sales of $110,000 for the last week. The actual sales turned out to be $125,000.
   a. What is the forecast for this week, using exponential smoothing and $\alpha = .1$?
   b. If sales this week turn out to be $120,000, what is the forecast for next week?

4. The Yummy Ice Cream Company projects the demand for ice cream using first-order exponential smoothing. Last week the forecast was 100,000 gallons of ice cream, and 80,000 gallons were actually sold.
   a. Using $\alpha = .1$, prepare a forecast for next week.
   b. Calculate the forecast using $\alpha = .2$ and $\alpha = .3$ for this problem. Which value of α gives the best forecast, assuming actual demand is 95,000 gallons?