

8.19. For the following data, calculate the mean absolute deviation.

Period	Forecast	Actual Demand	Absolute Deviation
1	100	105	
2	105	95	
3	110	90	
4	115	135	
5	120	105	
6	125	120	
Total	675	650	

8.20. A company uses a tracking signal trigger of ± 4 to decide whether a forecast should be reviewed. Given the following history, determine in which period the forecast should be reviewed. MAD for the item is 15. Is there any previous indication that the forecast should be reviewed?

Period	Forecast	Actual	Deviation	Cumulative Deviation	Tracking Signal
1	100	110			
2	105	90			
3	110	85			
4	115	110			
5	120	105			
6	125	95			

NORTHCUTT BIKES: THE FORECASTING PROBLEM

Jan Northcutt, owner of Northcutt Bikes, started business in 1995 when she noticed the quality of bikes she purchased for sale in her bike shop declining while the prices went up. She also found it more difficult to obtain the features she wanted on ordered bikes without waiting for months. Her frustration turned to a determination to build her own bikes to her particular customer specifications.

She began by buying all the necessary parts (frames, seats, tires, etc.) and assembling them in a rented garage using two helpers. As the word spread about her shop's responsiveness to options, delivery, and quality, however, the individual customer base grew to include other bike shops in the area. As her business grew and demanded more of her attention, she soon found it necessary to sell the bike shop itself and concentrate on the production of bikes from a fairly large leased factory space.