**Problem Q-28[Multi-period production]**

A company named KIDS WORLD is a toy manufacturing company and sells toys for the kids. They found a new retailer and the demand for that retailer for next 4 months is as follow. A retailer wants to buy 720,800,1000 and 750 units of variety of games like board games, puzzle games for the age group of 5-12. In order to meet the demand of the retailer, the production costs per unit per month are $70, $85, $50 and $80. The holding cost (storage cost) per unit at the end of each month is $25. If there are any products which are left at the end of 4 months, can be sold for $66. Assuming there is no inventory at the beginning and also the retailers demand has to be met on time, develop a mathematical model to minimize the net cost incurred in meeting the demand for next four months.