

# Exercise supply chain essay

Literature, Russian Literature



Suppose you are a trader in the vegetable and fruit business and you want to buy fresh tomatoes. A box of tomatoes costs \$0.40 and you sell it for \$1.20.

When a customer observes a stock out. The customer is likely to change to a competitor. Which results in a loss of goodwill that is quantified as \$0.50.

Any remaining boxes at the end of the week are sold for \$0.15. Suppose it was observed that the demand per week ranges from 15 boxes to 21 boxes,

Based on the demand observations in the past 50 weeks. The weekly demand forecast is as follows: The owner needs to place an order for tomatoes for the next week, HOW many boxes should (s)he order to maximize the expected profit? 3.

Wool's Discount store sells toy race cars with a wholesale price of \$5. The estimated annual demand ranges from 4,223 to 5,625 race cars. The fixed order cost is \$50, whereas the annual inventory carrying cost is 20% of the wholesale price. A.

What would be the range in which the optimal order quantity is in? As it turns out the actual demand was 5,041 race cars. What would have been the optimal order quantity? C. What would be the maximal cost penalty when you compare the range that you found ; n the answer to part a to the order quantity that you found in the answer to part b? 4. Sarah's Discount Emporium is selling 52" LCD TV's, which she buys for \$250 at the manufacturer and sells for \$360 in her store. It is difficult to predict demand for the LCD TV'S. Based on data from previous years. The following forecast is made.