Answer on Question #67704 - Economics - Accounting

A Makawerete Franchise expects to sell 50,000 big burgers annually. The special burgers can be ordered by packs only, and each pack contains 10 buns. The cost of placing an order is $50, while the storage cost is $0.50 per pack. According to their records the average daily sales of Big Burgers is 137, the maximum-ever daily sales is 250, and the typical minimum sales os 50. Packs with the Big Burgers normally arrive 10 days after the order. In the past the maximum delivery time was 20 days, and the minimum was 7 days.

Required:

a) How much is the EOQ? (5 marks)

b) Calculate the reorder point and explain it briefly. (5 marks)

c) How would the reorder point change, if the permanent safety stock is 100 packs? (5 marks)

d) What problems can arise from “understocking” of the Burgers? (5 marks)

Solution

a) EOQ = $\sqrt{\frac{2 \times \text{demand} \times \text{orderingcщiei}}{\text{carringcosts}}} = \sqrt{\frac{2 \times 5{,}000 \times \$50}{\$0.50}} = 1000 \text{ unitsper order}$

demand = 50,000 big burgers / 10 buns = 5,000 pack

b) Reorder point = (average daily unit sales x delivery lead time) + safety stock

delivery lead time = 10 days

Reorder point = (137 x 10) = 1370 unit

c) based on the formula:

Reorder point = (average daily unit sales x delivery lead time) + safety stock

Reorder point = (137 x 10) + 100 = 1470 unit

d) Problems can arise from “understocking” of the Burgers:

- insufficient goods on sale results in lower revenue;
- customer loss (loss of supply);
- product failure (loss of supply).