Answer on Question #67678 - 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) Economic order quantity = square root of [(2 x **demand x ordering costs**) ÷ **carrying costs**]

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

$$EOQ = \sqrt{\frac{2 \times 5,000 \times \$50}{\$0.50}} = 1000 \text{ units per order}$$

b) Re-order Level = Maximum usage x Maximum Re-order period = 250 **×** 20 = 500 units

Minimum Level = Re-order Level – (average daily sales **x** normally arrive**)**

= 5,000 – (137 × 10)

= 5,000 – 1,370 = 3,630 units

c) (average daily sales **x** normally arrive) + Safety stock

Re-order Level = Maximum usage x Maximum Re-order period + Safety stock = 250 **×** 20 + 100 = 5,100 units

Minimum Level = Re-order Level – (average daily sales **x** normally arrive**)** + Safety stock

= 5,100 – (137 × 10) + 100

= 5,100 – 1,370 + 100 = 3,830 units

d) insufficient goods on sale results in lower revenue

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