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Cool! I'am really happy

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#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

167 CHAPTER 12 MANAGING INVENTORY

- 1218 (a) Reorder point = Demand during lead time
= 100 units/day \times 2.5 days = 250 units
(b) Demand during lead time (daily) = 250 units/day
ROP = 250 units/day \times 2.5 days = 625 units
(c) Demand during lead time (days) = 2.5 days
ROP = 50 units/day \times 2.5 days = 125 units
- 1219 (a) $Q = 1000$
Number of orders/year = 360
Lead time = 5 days
ROP = (Demand/Day) \times (Lead time) = (10,000/360) \times 5 = 138.9 \approx 139 units
(b) This number is important because it helps Decision Key enough inventory to prevent stockouts while also saving for the new order to arrive.
- 1220 (a) $EOQ = \sqrt{\frac{2 \times \text{Annual Demand} \times \text{Order Cost}}{\text{Holding Cost}}} = \sqrt{\frac{2 \times 100,000 \times 10}{0.25}} = 2828.4 \approx 2828$ units
(b) Average inventory = 1414.2
(c) Optimal number of orders/year = 128
(d) Optimal days between orders = $\frac{360}{128} = 2.81$
(e) Cost of inventory management, excluding cost of goods = (11.62 \times 2828) + (1414.2 \times 0.25) = \$32,997.50
(f) Total annual inventory cost = \$41,897.50 (including the \$10,000 cost of goods)
Now, Reorder point is arrived.
- 1221 (a) $Q = \sqrt{\frac{2 \times \text{Annual Demand} \times \text{Order Cost}}{\text{Holding Cost}}} = \sqrt{\frac{2 \times 100,000 \times 10}{0.25}} = 2828.4 \approx 2828$ units
(b) Average inventory = $\frac{Q}{2} = \frac{2828}{2} = 1414.2$ units
Annual holding cost = $\frac{Q}{2} \times \text{Holding Cost} = 1414.2 \times 0.25 = \353.55
(c) Number of orders = $\frac{D}{Q} = \frac{100,000}{2828} = 35.36 \approx 35$ orders/year
Annual order cost = $\frac{D}{Q} \times \text{Order Cost} = 35.36 \times 10 = \353.60
(d) $TC = \frac{D}{Q} \times \text{Order Cost} + \frac{Q}{2} \times \text{Holding Cost} = 35.36 \times 10 + 1414.2 \times 0.25 = \388.96
(e) Time between orders = $\frac{360}{35.36} = 10.18$ days
(f) ROP = $d \times L = 100 \times 10 = 10,000$ units (where 10 = daily demand)
- 1224 (a) Total cost = Order cost + Holding cost = $\frac{D}{Q} \times C_o + \frac{Q}{2} \times C_h$
For $Q = 25$: $\frac{1,200 \times 25}{25} + \frac{25 \times 25}{2} = \$1,500$
For $Q = 50$: $\frac{1,200 \times 50}{50} + \frac{50 \times 25}{2} = \$1,250$
For $Q = 100$: $\frac{1,200 \times 100}{100} + \frac{100 \times 25}{2} = \$1,250$
For $Q = 200$: $\frac{1,200 \times 200}{200} + \frac{200 \times 25}{2} = \$1,250$
For $Q = 400$: $\frac{1,200 \times 400}{400} + \frac{400 \times 25}{2} = \$1,500$
(b) Economic Order Quantity:
 $Q^* = \sqrt{\frac{2 \times D \times C_o}{C_h}} = \sqrt{\frac{2 \times 1,200 \times 25}{0.25}} = 489.9 \approx 490$ units
where D = annual demand, S = setup or order cost, C_h = holding cost.
The optimal order quantity is order quantity will not have a significant effect on total cost. If we order twice as many (e.g., Q goes from 25 to 50), TC increases by only \$250 (see part a).
1225 (a) The EOQ assumption are met, so the optimal order quantity is:
 $EOQ = \sqrt{\frac{2 \times \text{Annual Demand} \times \text{Order Cost}}{\text{Holding Cost}}} = \sqrt{\frac{2 \times 100,000 \times 10}{0.25}} = 2828.4 \approx 2828$ units
(b) Number of orders per year = $D/Q = 100,000 / 2828 = 35.36 \approx 35$ orders/year.
Note that this would mean in one year the company places 35 orders and in the next it would only need 2 orders since sales inventory would be carried over from the previous year. It averages 2.5 orders per year.
(c) Average inventory = $Q/2 = 1414.2 \approx 1414$ units
(d) Given an annual demand of 200, a carrying cost of \$5, and an order quantity of 100, Francisco Electronics must determine what the ordering cost would have to be for the order policy of 100 units to be optimal. To find the answer to the problem, we must solve the traditional economic order quantity equation for the ordering cost. As you can see in the calculation, an ordering cost of \$45 is needed for the order quantity of 100 units to be optimal.
 $Q = \sqrt{\frac{2 \times D \times C_o}{C_h}}$
 $5 = \sqrt{\frac{2 \times 200 \times C_o}{5}}$
 $25 = \frac{400 \times C_o}{5}$
 $125 = 400 \times C_o$
 $C_o = \frac{125}{400} = \0.3125

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