

(P8)

Consumption rate = 750 parts/month

Production rate = 2000 parts/month

Storage costs = 10\$ per unit-year W

Interest charges = \$5 per unit-year I

Setup charges per batch = 200\$

$$Q_s = \sqrt{\frac{2PD}{(I+2W)(1-\frac{P}{A})}}$$

$$T_{CM} = C + \frac{P}{Q} + \frac{(I+W)(\text{Average Inventory})}{D}$$

$$D = \frac{Q_M}{T - T_A}$$

$$\therefore T_{CM} = C + \frac{P}{Q} + \frac{(I+W)(\text{Average Inventory})}{D}$$