

Inventory Management V

Finite Planning Horizon

Lecture 9
ESD.260 Fall 2003

Caplice

Assumptions: Basic FPH Model

- ◆ Demand
 - Constant vs Variable
 - Known vs Random
 - Continuous vs Discrete
- ◆ Lead time
 - Instantaneous
 - Constant or Variable (deterministic/stochastic)
- ◆ Dependence of items
 - Independent
 - Correlated
 - Indentured
- ◆ Review Time
 - Continuous vs Periodic
- ◆ Number of Echelons
 - One vs Many
- ◆ Capacity / Resources
 - Unlimited vs Limited
- ◆ Discounts
 - None
 - All Units or Incremental
- ◆ Excess Demand
 - None
 - All orders are backordered
 - Lost orders
 - Substitution
- ◆ Perishability
 - None
 - Uniform with time
- ◆ Planning Horizon
 - Single Period
 - Finite Period
 - Infinite
- ◆ Number of Items
 - One
 - Many

Example

When should I order and for how much?

Costs

$D = 2000$ items per year

$C_o = \$500.00$ per order

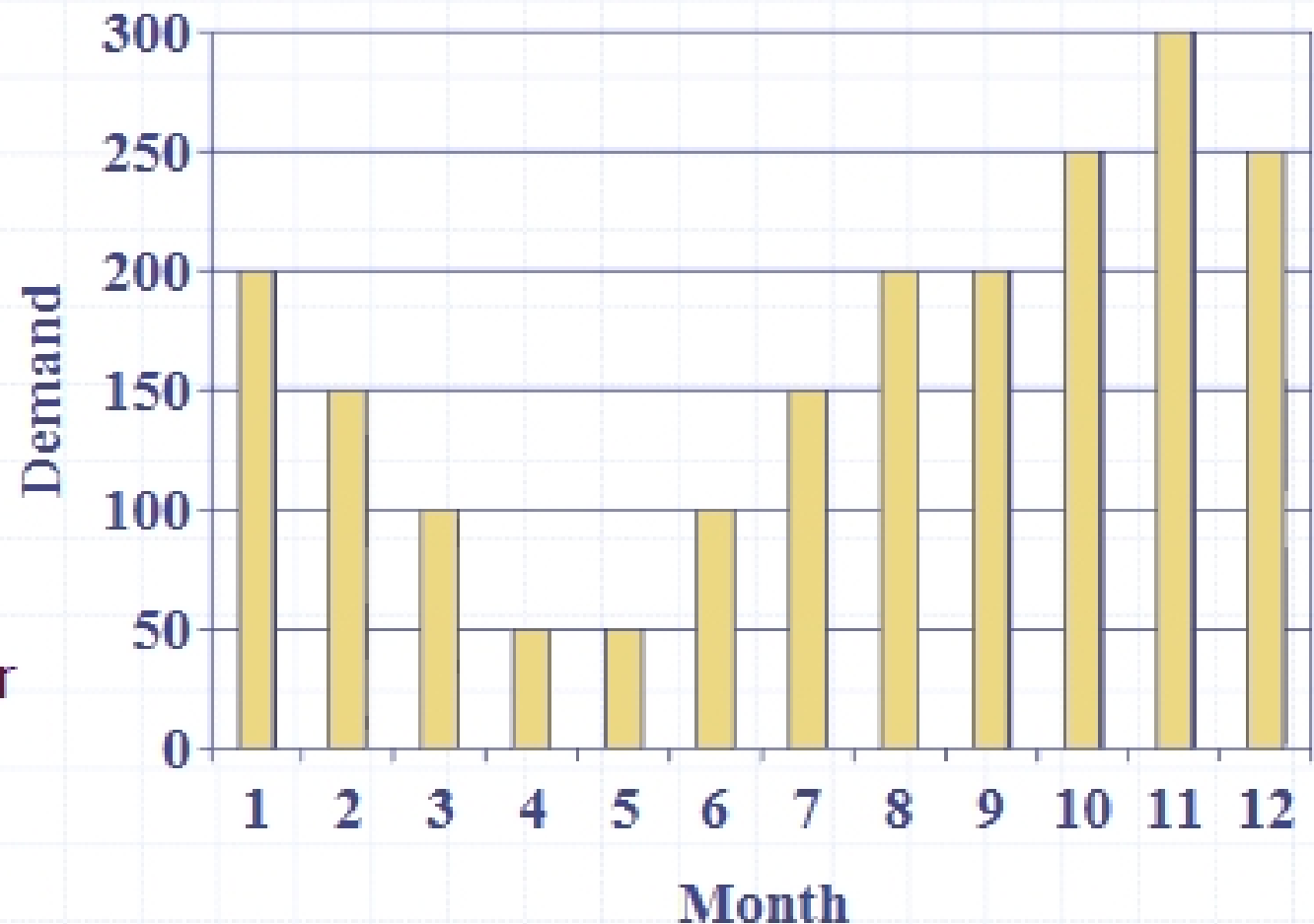
$C_p = \$50.00$ per item

$C_h = 24\%$ per item per year

$C_{hp} = (C_h C_p) / N$

$= \$1$ per month per item

$N =$ number of periods per year



More Assumptions

- Demand is required and consumed on first day of the period
- Holding costs are not charged on items used in that period
- Holding costs are charged for inventory ordered in advance of need