

31 Omar Haaris receives 5,000 tripods annually from Top-Grade Suppliers to meet his annual demand. Omar runs a large photographic outlet, and the tripods are used primarily with 35mm cameras. The ordering cost is \$15 per order, and the carrying cost is \$0.50 per unit per year. Weekly demand is 100 tripods.

- (a) What is the optimal order quantity?
- (b) Top-Grade is offering a new shipping option. When an order is placed, Top-Grade will ship one-third of the order every week for three weeks instead of shipping the entire order at one time. What is the order quantity if Omar

chooses to use this option? To simplify your calculations, assume that the average inventory is equal to one-half of the maximum inventory level for Top-Grade's new option.

- (c) Suppose Top-Grade Suppliers offers to ship one-fifth of the order every week for five weeks. What is the order quantity under this option? Make the same assumption as in part (b).
- (d) Calculate the total cost for each option. What do you recommend?