

1. Deskward is a typical profit-maximizing firm that produces and sells wooden desks in a constant-cost, perfectly competitive market that is in long-run equilibrium.
 - A. Draw correctly labeled side-by-side graphs for the wooden desk market and for Deskward and show each of the following.
 - i. The market equilibrium price and quantity, labeled P_M and Q_M , respectively
 - ii. Deskward's profit-maximizing price and quantity, labeled P_F and Q_F , respectively
 - iii. Deskward's average total cost curve consistent with long-run equilibrium, labeled ATC
 - B. If the monthly rent, a fixed cost, on Deskward's factory building increases, what will happen to the firm's profit-maximizing quantity in the short run? Explain.
 - C. Suppose the government is considering granting a per-unit subsidy to producers of wooden desks. On your market graph in part A, show the short-run effect of a per-unit subsidy on each of the following.
 - i. The new market equilibrium price and quantity of wooden desks, labeled P^* and Q^* , respectively
 - ii. The area representing the total cost of the subsidy to the government, shaded completely
 - D. Instead of the per-unit subsidy, suppose the government imposes a binding price floor in the market for wooden desks. Will the price floor result in a shortage of wooden desks, a surplus of wooden desks, or neither? Explain.
 - E. Deskward also produces chairs. Deskward increases its production from 500 chairs to 600 chairs, and its long-run total cost increases from \$80,000 to \$108,000.
 - i. Calculate Deskward's long-run average total cost of producing 500 chairs. Show your work.
 - ii. As Deskward increases production from 500 chairs to 600 chairs, is Deskward experiencing economies of scale, diseconomies of scale, or the efficient scale? Explain using numbers.