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## Section 3.4: More Optimization Problems

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**Example 1.** An automobile dealer can sell four cars per day at a price of \$12,000. She estimates that for each \$200 price reduction she can sell two more cars per day. Each car costs her \$10,000, and her fixed costs are \$1000.

(a) What price should she charge to maximize her profit?

(b) How many cars will she sell at this price?

**Example 2.** A peach grower finds that if he plants 40 trees per acre, each tree will yield 60 bushels of peaches. He also estimates that for each additional tree that he plants per acre, the yield of each tree will decrease by 2 bushels. How many trees should he plant per acre to maximize his harvest?