a) Perform an analysis of the volume over which each location is preferable.
b) How does your answer change if Dallas's fixed costs increase by 10%? PX

•••**8.18** Hyundai Motors is considering three sites—A, B, and C—at which to locate a factory to build its new-model automobile, the Hyundai Sport C150. The goal is to locate at a minimum-cost site, where cost is measured by the annual fixed plus variable costs of production. Hyundai Motors has gathered the following data:

| SITE | ANNUALIZED FIXED COST | VARIABLE COST PER AUTO PRODUCED |
|---|---|---|
| A | $10,000,000 | $2,500 |
| B | $20,000,000 | $2,000 |
| C | $25,000,000 | $1,000 |

The firm knows it will produce between 0 and 60,000 Sport C150s at the new plant each year, but, thus far, that is the extent of its knowledge about production plans.
a) For what values of volume, V, of production, if any, is site C a recommended site?
b) What volume indicates site A is optimal?
c) Over what range of volume is site B optimal? Why? PX

••**8.19** Peggy Lane Corp., a producer of machine tools, wants to move to a larger site. Two alternative locations have been identified: Bonham and McKinney. Bonham would have fixed costs of $800,000 per year and variable costs of $14,000 per standard unit produced. McKinney would have annual fixed costs of $920,000 and variable costs of $13,000 per standard unit. The finished items sell for $29,000 each.
a) At what volume of output would the two locations have the same profit?