4-8 The following estimates are available for George Manufacturing for 2004:

George Manufacturing

Estimated Manufacturing Overhead

For the year Ended December 31, 2004

Production machine setup $75,000

Production machine depreciation 240,000

Quality testing 25,000

Other overhead cost 150,000

Total manufacturing overhead $490,000

Estimated Overhead Activities

For the Year Ended December 31, 2004

Number of machine setups 100

Number of machine hours $200

Number of tests performed 5,000

Number of direct labor hours 16,000

The following information is available for production of two products, the AA1 and the BB2:

AA1 BB2

Selling price per unit $2.40 $3.25

Number of units produced 10,000 500

Total direct material cost 5,000 $250

Total direct labor cost $6,000 $320

Number of machine setups 1 1

Number of machines hours 100 5

Number of tests performed 100 50

Numbers of direct labor hours 400 20

George Manufacturing uses a traditional overhead allocation system. Manufacturing overhead is allocated based on direct labor hours. George Manufacturing’s sales manager has submitted a proposal that would shift the marketing focus to low-volume products such as the BB2. The proposal is prompted by the higher markups and lack of competition, even at high selling prices.

The company president is concerned that the company’s cost per unit may be sending the wrong message. He recently learned of activity based costing and wonders if it might help. Assume that you are a member of a work team that has been assigned to review the situation.

Required:

a. Determine the per unit cost for AA1 and BB2 using direct labor hours as the allocation base for all manufacturing overhead cost.

b. Determine the per unit for AA1 and BB2 using activity-based costing to allocate manufacturing overhead cost. (Note: Allocate other overhead cost based on direct labor hours.)

c. Discuss the marketing manager’s proposal in light of your findings. Discuss what would happen if the marketing manager’s sales strategy was adopted.