Applewood Electronics manufactures two large-screen television models, the Monarch, which has been produced for five years and sells for $900, and the Regal, a new model that sells for $1,140. Applewood’s CEO, Harry Hazelwood, suggested that the company should concentrate its marketing resources on the Regal model and begin to phase out the Monarch model.

Applewood currently uses a traditional costing system. The following cost information has been used as a basis for pricing decisions over the past year.

| Per-Unit Data | Monarch | Regal |
| --- | --- | --- |
| Direct materials | $208 | $584 |
| Direct labor hours | 1.5 | 3.5 |
| Machine hours | 8.0 | 4.0 |
| Units produced | 22,000 | 4,000 |

Direct labor cost is $12 per hour, and the machine usage cost is $18 per hour. Manufacturing overhead costs were estimated at $4,800,000 and were allocated on the basis of machine hours.

Martin Alecks, the new company controller, suggested that an activity-based costing analysis first be run to get a better picture of the true manufacturing cost. The following data were collected:

| Activity Center | | | Cost Driver | | | Traceable Costs | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Soldering | | | Number of solder joints | | | $ 942,000 | |
| Shipments | | | Number of shipments | | | 860,000 | |
| Quality control | | | Number of inspections | | | 1,240,000 | |
| Purchase orders | | | Number of orders | | | 950,400 | |
| Machining | | | Machine hours | | | 57,600 | |
| Machine setups | | | Number of setups | | | 750,000 | |
|  | Total traceable costs | |  | | | $4,800,000 | |
|  |  | |  | | |  | |
|  | |  | | Number of Events |  | |
| Activity | | Monarch | | Regal | Total | |
| Soldering | | 1,185,000 | | 385,000 | 1,570,000 | |
| Shipments | | 16,200 | | 3,800 | 20,000 | |
| Quality control | | 56,200 | | 21,300 | 77,500 | |
| Purchase orders | | 80,100 | | 109,980 | 190,080 | |
| Machining | | 176,000 | | 16,000 | 192,000 | |
| Machine setups | | 16,000 | | 14,000 | 30,000 | |

Selling, general, and administrative expenses per unit sold are $265.00 for Monarch and $244.50 for Regal.

**REQUIRED:**

|  |  |  |
| --- | --- | --- |
|  | **A.** | Calculate the manufacturing cost per unit for Monarch and Regal under: |
|  |  | **1**. A traditional costing system |
|  |  | **2**. The ABC system |
|  | **B.** | Explain the differences in manufacturing cost per unit calculated in part (A). |
|  | **C.** | Calculate the operating profit per unit for Monarch and Regal under: |
|  |  | **1**. A traditional costing system |
|  |  | **2**. The ABC system |
|  | **D.** | Should Applewood concentrate its marketing efforts on Monarch or on Regal? Explain how the use of ABC affects your recommendation. |