Problem 7 - 17

1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B300 | | T500 | | Total |
|  | Amount | % | Amount | % | Amount |
| Direct materials | $436,300 | 63.42% | $251,700 | 36.58% | $688,000 |
| Direct labor | $200,000 | 65.79% | $104,000 | 34.21% | $304,000 |
| Manufacturing overhead | $400,000 | 65.79% | $208,000 | 34.21% | $608,000 |
| Total cost assigned to products | $1,036,300 |  | $563,700 |  | $1,600,000 |
| Selling and administrative |  |  |  |  | $550,000 |
| Total cost |  |  |  |  | $2,150,000 |

2.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | B300 | | T500 | |
| Sales |  | $1,400,000 |  | $700,000 |
| Costs |  |  |  |  |
| Direct materials | $436,300 |  | $251,700 |  |
| Direct labor | $200,000 |  | $104,000 |  |
| Advertising expenses | $50,000 |  | $100,000 |  |
| Machining | $126,000 |  | $87,500 |  |
| Setups | $31,500 |  | $126,000 |  |
| Product-sustaining | $60,000 | $903,800 | $60,000 | $729,200 |
| Product margin |  | $496,200 |  | ($29,200) |

3.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B300 | | T500 | | Total |
| Traditional Cost System | Amount | % | Amount | % | Amount |
| Direct materials | $436,300 | 63.42% | $251,700 | 36.58% | $688,000 |
| Direct labor | $200,000 | 65.79% | $104,000 | 34.21% | $304,000 |
| Manufacturing overhead | $400,000 | 65.79% | $208,000 | 34.21% | $608,000 |
| Total cost assigned to products | $1,036,300 |  | $563,700 |  | $1,600,000 |
| Selling and administrative |  |  |  |  | $550,000 |
| Total cost |  |  |  |  | $2,150,000 |
|  | B300 | | T500 | | Total |
| Activity-Based Costing System | Amount | % | Amount | % | Amount |
| Direct costs |  |  |  |  |  |
| Direct materials | $436,300 | 63.42% | $251,700 | 36.58% | $688,000 |
| Direct labor | $200,000 | 65.79% | $104,000 | 34.21% | $304,000 |
| Advertising expenses | $50,000 | 33.33% | $100,000 | 66.67% | $150,000 |
| Indirect costs |  |  |  |  |  |
| Machining | $126,000 | 59.02% | $87,500 | 40.98% | $213,500 |
| Setups | $31,500 | 20% | $126,000 | 80% | $157,500 |
| Product-sustaining | $60,000 | 50% | $60,000 | 50% | $120,000 |
| Total cost assigned to products | $903,800 |  | $729,200 |  | $1,633,000 |
| Costs not assigned to products |  |  |  |  |  |
| Organization-sustaining |  |  |  |  | $517,000 |
| Total cost |  |  |  |  | $2,150,000 |

In traditional costing system, we divide manufacturing cost three parts which are direct materials, direct labor and manufacturing overhead and we add selling and administrative expenses to calculate total cost. But in activity based costing, we divide cost different ways which are direct costs and indirect cost. When we allocate certain cost to direct or indirect cost, we consider first whether this cost is related to product or not. If not we do not allocate this to direct or indirect cost. Like selling and administrative expenses, we consider this after allocation. That’s why traditional and activity based costing assignment differ.