PROBLEM 6–17 Comparing Traditional and Activity-Based Product Margins [LO 6–1, LO 6–3, LO 6–4, LO 6–5]

Precision Manufacturing Inc. (PMI) makes two types of industrial component parts—the EX300 and the TX500. An absorption costing income statement for the most recent period is shown below:

Precision Manufacturing Inc. Income Statement	
Sales	$1,700,000
Cost of goods sold	1,200,000
Gross margin	500,000
Selling and administrative expenses	550,000
Net operating loss	$ (50,000)

PMI produced and sold 60,000 units of EX300 at a price of $20 per unit and 12,500 units of TX500 at a price of $40 per unit. The company's traditional cost system allocates manufacturing overhead to products using a plantwide overhead rate and direct labor dollars as the allocation base. Additional information relating to the company's two product lines is shown below:

	EX300	TX500	Total
Direct materials	$366,325	$162,550	$ 528,875
Direct labor	$120,000	$42,500	162,500
Manufacturing overhead			508,625
Cost of goods sold			$1,200,000

The company has created an activity-based costing system to evaluate the profitability of its products. PMI's ABC implementation team concluded that $50,000 and $100,000 of the company's advertising expenses could be directly traced to EX300 and TX500, respectively. The remainder of the selling and administrative expenses was organization-sustaining in nature. The ABC team also distributed the company's manufacturing overhead to four activities as shown below:

		Activity		
Activity Cost Pool (and Activity Measure)	Manufacturing Overhead	EX300	TX500	Total
Machining (machine-hours)	$198,250	90,000	62,500	152,500
Setups (setup hours)	150,000	75	300	375
Product-sustaining (number of products)	100,000	1	1	2
Other (organization-sustaining costs)	60,375	NA	NA	NA
Total manufacturing overhead cost	$508,625			

Required:

1. Using Exhibit 6–12 as a guide, compute the product margins for the EX300 and TX500 under the company's traditional costing system.
2. Using Exhibit 6–10 as a guide, compute the product margins for EX300 and TX500 under the activity-based costing system.
3. Using Exhibit 6–13 as a guide, prepare a quantitative comparison of the traditional and activity-based cost assignments. Explain why the traditional and activity-based cost assignments differ.