PROBLEM 6–18 Comparing Traditional and Activity-Based Product Margins [LO 6–1, LO 6–3, LO 6–4, LO 6–5]

Rocky Mountain Corporation makes two types of hiking boots—Xactive and the Pathbreaker. Data concerning these two product lines appear below:

	Xactive	Pathbreaker
Selling price per unit	$127.00	$89.00
Direct materials per unit	$64.80	$51.00
Direct labor per unit	$18.20	$13.00
Direct labor-hours per unit	1.4 DLHs	1.0 DLHs
Estimated annual production and sales	25,000 units	75,000 units

The company has a traditional costing system in which manufacturing overhead is applied to units based on direct labor-hours. Data concerning manufacturing overhead and direct labor-hours for the upcoming year appear below:

Estimated total manufacturing overhead	$2,200,000
Estimated total direct labor-hours	110,000 DLHs

Required:

1. Using Exhibit 6–12 as a guide, compute the product margins for the Xactive and the Pathbreaker products under the company's traditional costing system.
2. The company is considering replacing its traditional costing system with an activity-based costing system that would assign its manufacturing overhead to the following four activity cost pools (the Other cost pool includes organization-sustaining costs and idle capacity costs):

Activities and Activity Measures	Estimated Overhead Cost	Expected Activity		
		Xactive	Pathbreaker	Total
Supporting direct labor (direct labor-hours)	$ 797,500	35,000	75,000	110,000
Batch setups (setups)	680,000	250	150	400
Product sustaining (number of products)	650,000	1	1	2
Other	72,500	NA	NA	NA
Total manufacturing overhead cost	$2,200,000			

   Using Exhibit 6–10 as a guide, compute the product margins for the Xactive and the Pathbreaker products 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.