Solutions to Homework #3

1. First-stage allocations of overhead costs to the activity cost pools:

Distribution of Resource Consumption Across Activity Cost Pools

	Supporting Direct Labor	Order Processing	Customer Support	Other	Totals
Wages and salaries	40%	30%	20%	10%	100%
Other overhead costs	30%	20%	20%	30%	100%

	Direct Labor Support	Order Processing	Customer Support	Other	Totals
Wages and salaries	$180,000	$ 135,000	$ 90,000	$ 45,000	$450,000
Other overhead costs	45,000	30,000	30,000	45,000	150,000
Total cost	$225,000	$165,000	$ 120,000	$ 90,000	$600,000

Example: 40% of $300,000 is $120,000.

2. Computation of activity rates:

Activity Cost Pools	(a) Total Cost	(b) Total Activity	(a) ÷ (b) Activity Rate
Supporting direct labor	$225,000	20,000 DLHs	$11.25 per DLH
Order processing	$165,000	400 orders	$412.5 per order
Customer support	$120,000	200 customers	$600 per customer

(continued)

3. Computation of the overhead costs for the Shenzhen Enterprises order:

Activity Cost Pool	(a) Activity Rate	(b) Activity	(a) × (b) ABC Cost
Supporting direct labor	$11.25 per DLH	20 DLHs*	$225
Order processing ..	$412.5 per order	1 order	$412.5
Customer support	$600 per customer	1 customer	600
Total....................			$1237.5

*2 DLHs per unit × 10 units = 20 DLHs.

4. The customer margin for Shenzhen Enterprises is computed as follows:

Customer Margin—ABC Analysis

Sales (10 units × $500 per unit)		$5,000
Costs:		
Direct materials ($180 per unit × 10 units)...	$1,800	
Direct labor ($50 per unit × 10 units)...........	500	
Support direct labor overhead (see part 3 above)	$225	
Order processing overhead (see part 3 above)	$412.5	
Customer support overhead (see part 3 above)	$600	3,537.5
Customer margin		$1,462.5