

**GCM 5123**  
Managerial Accounting

Activity Based Costing

29/9/2012

1. The Coletti Cleaning Brigade Company provides housecleaning services to its clients. The company uses an activity-based costing system for its overhead costs. The company has provided the following data from its activity-based costing system.

Activity Cost Pool	Total Cost	Total Activity
Cleaning .....	\$302,993	43,100 hours
Job support .....	79,100	5,000 jobs
Client support .....	3,348	180 clients
Other .....	<u>150,000</u>	Not applicable
Total .....	<u>\$535,441</u>	

The "Other" activity cost pool consists of the costs of idle capacity and organization-sustaining costs. One particular client, the Tubman family, requested 26 jobs during the year that required a total of 104 hours of housecleaning. For this service, the client was charged \$1,420.

Required:

- a. Using the activity-based costing system, compute the customer margin for the Tubman family. Round off all calculations to the nearest whole cent.
  
- b. Assume the company decides instead to use a traditional costing system in which ALL costs are allocated to customers on the basis of cleaning hours. Compute the margin for the Tubman family. Round off all calculations to the nearest whole cent.

Answer:

a. The first step is to compute activity rates:

	Total Cost	Total Activity	Activity Rates
Cleaning .....	\$302,993	43,100 hours	\$7.03 per hour
Job support .....	\$79,100	5,000 jobs	\$15.82 per job
Client support .....	\$3,348	180 clients	\$18.60 per client

The customer margin for the family is computed as follows:

Client charges .....		\$1,420.00
Costs:		
Cleaning .....	\$731.12	
Job support .....	411.32	
Client support .....	18.60	1,161.04
Customer margin .....		<u>\$258.96</u>

Computations for costs:

Cleaning: 104 hours x \$7.03 per hour = \$731.12

Job support: 26 jobs x \$15.82 per job = \$411.32

Client support: 1 client x \$18.60 per client = \$18.60

b. The margin if all costs are allocated on the basis of cleaning hours:

Predetermined overhead rate =  $\$535,441 \div 43,100 \text{ hours} = \$12.42 \text{ per hour}$

Client charges .....	\$1,420.00
Allocated costs* .....	<u>1,291.68</u>
Customer margin .....	<u>\$128.32</u>

\* 104 hours  $\times$  \$12.42 per hour = \$1,291.68

2. Darter Company manufactures two products, Product F and Product G. The company expects to produce and sell 2,600 units of Product F and 6,000 units of Product G during the current year. The company uses activity-based costing to compute unit product costs for external reports. Data relating to the company's three activity cost pools are given below for the current year:

Activity Cost Pool	Estimated Overhead Costs	Estimated Activity		
		Product F	Product G	Total
Machine setups.....	\$10,400	80	180	260
Purchase orders .....	\$88,440	810	1,200	2,010
General factory.....	\$65,340	2,340	3,600	5,940

Required:

Using the activity-based costing approach, determine the overhead cost per unit for each product.

Answer: The activity rates for each activity cost pool are as follows:

Activity Cost Pool	Estimated Overhead Costs	Expected Activity	Activity Rate
Machine setups.....	\$10,400	260	\$40.00
Purchase orders .....	\$88,440	2,010	\$44.00
General factory.....	\$65,340	5,940	\$11.00

The overhead cost charged to each product is:

	Product F		Product G	
	Activity	Amount	Activity	Amount
Machine setups.....	80	\$3,200	180	\$7,200
Purchase orders .....	810	35,640	1,200	52,800
General factory.....	2,340	25,740	3,600	39,600
Total overhead cost ...		<u>\$64,580</u>		<u>\$99,600</u>

Overhead cost per unit:

Product F:  $\$64,580 \div 2,600 \text{ units} = \$24.84 \text{ per unit}$

Product G:  $\$99,600 \div 6,000 \text{ units} = \$16.60 \text{ per unit}$

3. Sailer Corporation uses the following activity rates from its activity-based costing to assign overhead costs to products.

Activity Cost Pools	Activity Rate
Setting up batches .....	\$96.01 per batch
Processing customer orders.....	\$21.72 per customer order
Assembling products.....	\$2.23 per assembly hour

Last year, Product J34U involved 48 batches, 22 customer orders, and 395 assembly hours.

Required:

How much overhead cost would be assigned to Product J34U using the company's activity-based costing system? Show your work!

Answer:

Setting up batches (48 batches × \$96.01 per batch).....	\$4,608.48
Processing customer orders (22 customer orders × \$21.72 per customer order).....	477.84
Assembling products (395 assembly hours × \$2.23 per assembly hour).....	880.85
Total overhead cost .....	<u>\$5,967.17</u>