Question 1 - CIA 596 III-82 - Service Cost Allocation

Fabricating and Finishing are the two production departments of a manufacturing company. Building Operations and Information Services are service departments that provide support to the two production departments as well as to each other. The company employs departmental overhead rates in the two production departments to allocate the service department costs to the production departments. Square footage is used to allocate building operations, and computer time is used to allocate information services.

The costs of the service departments and relevant operating data for the departments are as follows:

	Building Operations	Information Services	Fabricating	Finishing
Costs:				
Labor and benefit costs	$200,000	$300,000		
Other traceable costs	350,000	900,000		
Total	$550,000	$1,200,000		
Operating Data:				
Square feet occupied	5,000	10,000	16,000	24,000
Computer time (in hours)	200		1,200	600

If the company employs the direct method to allocate the costs of the service departments, then the amount of building operations costs allocated to Fabricating would be

A. $220,000
B. $140,000
C. $160,000
D. $176,000

A. Under the direct method we ignore services that are provided to the other service departments. In order to allocate the building operation costs to fabricating, we simply need to determine what percentage of the building space taken up by production departments is used by fabricating (we ignore the building usage by the other service departments under direct costing). There is a total of 40,000 square feet and fabricating occupies 40% of that so they will get 40% of the building costs, or $220,000.

B. This answer ignores the labor and benefit costs, which also need to be allocated.

C. This answer includes all of the departments (including building operations) in the calculation of total square feet.

D. This answer includes the other service department in the calculation of the total square feet. This would be done under the step method.

Question 2 - CMA 1290 3-3 - Service Cost Allocation

There are several methods for allocating service department costs to the production departments. The method that recognizes service provided by one service department to another but does not recognize reciprocal interdepartmental service is the

A. Direct method.
B. Reciprocal method.
C. Step-down method.
D. Variable method.

A. Under the direct method no costs are allocated between the service departments.

B. Under the reciprocal method the costs of the service departments are allocated to each other, so there is a recognition of reciprocal interdepartmental service.

C. Under the step method, the services that one department provides to the other departments are recognized. However, in the allocation of the costs of the second service department, no costs are allocated back to the first department. In the allocation of the costs of the third service department, no costs are allocated back to the first or second service department, and so on.

D. This answer is incorrect because it is not a method of allocating service department costs.

Question 3 - CIA 1196 3-88 - Service Cost Allocation

The method for allocating service department costs that best recognizes the mutual services rendered to other service departments is the:

A. Dual-rate allocation method.
B. Direct allocation method.
C. Step-down allocation method.
D. Reciprocal allocation method.

A. The dual-rate allocation method is really a refinement of either the direct or step-down methods, depending upon how it is applied. In the dual-rate method, variable and fixed costs are allocated to departments in a two-step process, variable costs on current use and fixed costs on a long-term, maximum capacity basis. This method may not recognize any reciprocity of services among service departments.

B. The direct allocation method allocates the cost of service departments directly to the production departments without any intermediate allocations to other service departments. Thus, this method does not recognize any reciprocity of services among service departments.

C. The step-down allocation method allocates service department costs to other service departments and production departments usually starting with the service department that provides the most service to other service departments. This method allows for partial recognition of reciprocity of services among service departments.

D. The reciprocal allocation method recognizes reciprocity among service department by explicitly including the mutual services rendered among support departments.

Question 4 - CMA 691 3-19 - Service Cost Allocation

The managers of Rochester Manufacturing are discussing ways to allocate the cost of service departments such as Quality Control and Maintenance to the production departments. To aid them in this discussion, the controller has provided the following information:

	Quality Control	Maintenance	Machining	Assembly	**Total**
Budgeted overhead costs before allocation	$350,000	$200,000	$400,000	$300,000	$1,250,000
Budgeted machine hours			50,000		50,000
Budgeted direct labor hours				25,000	25,000
Budgeted hours of service:					
Quality control		7,000	21,000	7,000	35,000
Maintenance	10,000		18,000	12,000	40,000

If Rochester Manufacturing uses the step-down method of allocating service costs beginning with quality control, the maintenance costs allocated to the assembly department would be

A. $162,000.
B. $200,000.
C. $108,000.
D. $70,000.

A. This answer is incorrect.

B. This answer is incorrect.

C. In the step down method we need to first allocate costs from QC, and in this process we will allocate some of its costs to the maintenance department. In total, QC provided 35,000 hours of service and maintenance used 7,000 of them. So, maintenance will get 20% of the QC costs, or $70,000. Adding this to the $200,000 of its own costs, the maintenance department has $270,000 to allocate. These will be allocated only to the production departments. The assembly department used 40% of the maintenance hours that were used by production departments, so $108,000 will be allocated to the assembly department ($270,000 × .4).

D. This answer is incorrect.

Question 5 - CIA 1194 III-49 - Service Cost Allocation

A company has two service departments (S1 and S2) and two production departments (P1 and P2). Departmental data for January were as follows:

		S1	S2
Costs incurred:		$27,000	$18,000
Service provided to:			
	S1	---	20%
	S2	10%	---
	P1	50%	30%
	P2	40%	50%

What are the total allocated service department costs to P2 if the company uses the reciprocal method of allocating its service department costs? (Round calculations to the nearest whole number.)

A. $19,800
B. $23,051
C. $22,500
D. $21,949

A. In this answer the costs are allocated to the production departments prior to the cross allocation of service costs.

B.

In order to use the reciprocal method we need to set up two equations, one for each of the two service departments. We will call the service departments Y (S1) and Z (S2) in our formulas. The overhead costs of S1 are as follows: Y = $27,000 + .2Z. The costs of S2 are Z = $18,000 + .1Y.

Substituting the second equation into the Z in the first equation, we get Y = $27,000 + .2($18,000 + .1Y). This simplifies to Y = $30,600 + .02Y, or .98Y = $30,600. Solving now for Y we get Y = $31,224.

We can now substitute Y into the second equation to solve for Z and we get Z = $18,000 + .1 ($31,224), or Z = $21,122. We now are able to allocate to the production departments.

P2 will get 40% of the costs of S1 and 50% of the costs of S2. This is equal to (.4 × $31,224) + (.5 × $21,122) = $23,051.

C. This answer is incorrect.

D. This is the amount of service costs allocated to P1.

Question 6 - CIA 594 III-75 - Service Cost Allocation

A company has two service departments, Power and Maintenance, and two production departments, Machining and Assembly. All costs are regarded as strictly variable. For September the following information is available:

	Service Departments		Production Departments	
	Power	*Maintenance*	*Machining*	*Assembly*
Direct costs	$62,500	$40,000	$25,000	$15,000
Actual activity:				
Kilowatt hrs.		50,000	150,000	50,000
Maintenance hours	250		1,125	1,125

If the company uses the direct method for allocating service departments costs to production departments, what dollar amount of Power Department cost will be allocated to the Machining Department for September?

A. $46,875
B. $37,500
C. $39,062.50
D. $15,625

A. Under the direct method of service cost allocation, we ignore the services that are provided from one service department to another. Therefore, the Power Department costs will be allocated only to the two production departments. In total the Power Department provided 200,000 kilowatt hours to the production departments, and of this 75% was to the machining department. Therefore, the machining department will get 75%, or $46,875 of the Power Department costs.

B. This answer included the allocation of the power department costs to the maintenance department as well as the production departments. Under the direct method, service department costs are not allocated to the other service departments.

C. This is the amount that would have been allocated if the direct costs of each production department had been used instead of the kilowatt hours.

D. This is the amount that would be allocated to the Assembly department.

Question 7 - CMA 691 3-16 - Service Cost Allocation

The managers of Rochester Manufacturing are discussing ways to allocate the cost of service departments such as Quality Control and Maintenance to the production departments. To aid them in this discussion, the controller has provided the following information:

	Quality Control	Maintenance	Machining	Assembly	**Total**
Budgeted overhead costs before allocation	$350,000	$200,000	$400,000	$300,000	$1,250,000
Budgeted machine hours			50,000		50,000
Budgeted direct labor hours				25,000	25,000
Budgeted hours of service:					
Quality control			7,000	21,000	7,000	35,000
Maintenance		10,000		18,000	12,000	40,000

If Rochester Manufacturing uses the direct method of allocating service department costs, the total service costs allocated to the assembly department would be

A. $87,500.
B. $167,500.
C. $80,000.
D. $120,000.

A. This is the amount of quality control costs allocated to the assembly department, not the total service costs allocated to the assembly department.

B. Under the direct method the service department costs are not allocated to other service departments. As such, we need to make certain that when we determine the ratio to allocate the costs to the production departments, we do not include the usage by the other service departments. In order to allocate the costs of the quality control department to assembly, we need to determine what percentage of the quality control time that was used by the production departments was used by assembly. Assembly used QC 7,000 hours and machining used QC 21,000. Thus, assembly will get 25% (7,000 ÷ 28,000), or $87,500 of the QC costs. Assembly used the maintenance department a total of 12,000 hours and machining used maintenance for 18,000 hours. Thus, assembly will get 40% (12,000 ÷ 30,000) of the maintenance costs, or $80,000. In total, therefore, the assembly department received $167,500 in costs allocated from the service departments.

C. This is the amount of maintenance costs allocated to the assembly department, not the total service costs allocated to the assembly department.

D. This answer is incorrect. Please see correct answer for an explanation.

Question 8 - CIA 581 IV-17 - Service Cost Allocation

The allocation of general overhead costs to operating departments can be least justified in determining

A. Costs for making management's decisions.
B. Costs for the federal government's cost-plus contracts.
C. Income tax payable.
D. Income of a product or functional unit.

A. Generally when making management decisions, the emphasis is on controllable costs, usually the variable costs of production. Therefore, the general overheads, which are very possibly not controllable in the short-run, would not be necessary.

B. Full absorption costing is required for government contracts and this requires the allocation of all overheads to the operating departments and then to the units.

C. Currently in the U.S., full absorption costing is required for tax purposes and this would require the allocation of general overhead to the operating departments.

D. The calculation of income requires the inclusion of all costs, including an allocation for general overheads.

Question 9 - CMA 697 3-9 - Service Cost Allocation

M&P Tool has three service departments that support the production area. Outlined below is the estimated overhead by department for the upcoming year.

Service Departments	Estimated Overhead	Number of Employees
Receiving	$25,000	2
Repair	35,000	2

Tool	10,000	1

Production Departments

Assembly	25
Bolting	12

The Repair Department supports the greatest number of departments, followed by the Tool Department. Overhead cost is allocated to departments based upon the number of employees.

Using the step-down method of allocation, the allocation from the Repair Department to the Tool Department would be

A. $11,667
B. $7,000
C. $875
D. $0

A. This answer is incorrect.

B. This answer is incorrect.

C. In the step down method the costs of the first service department are allocated to the other service departments and the production departments. The costs of the second service department are allocated to the remaining service departments (but not back to the first service department) and the production departments. Since the Repair Department provides the most services to the other service departments, it is allocated first. The tool department will receive 1/40 of the Repair Department since it has 1 employee and the Receiving Department and production departments have 39 employees. This amount is $875.

D. This answer would be correct if the direct method were being used. However, in the step method some costs will be allocated from the Repair Department to the Tool Department.

Question 10 - CMA 691 3-17 - Service Cost Allocation

The managers of Rochester Manufacturing are discussing ways to allocate the cost of service departments such as Quality Control and Maintenance to the production departments. To aid them in this discussion, the controller has provided the following information:

	Quality Control	Maintenance	Machining	Assembly	Total
Budgeted overhead costs before allocation	$350,000	$200,000	$400,000	$300,000	$1,250,000
Budgeted machine hours			50,000		50,000
Budgeted direct labor hours				25,000	25,000
Budgeted hours of service:					
Quality control		7,000	21,000	7,000	35,000
Maintenance	10,000		18,000	12,000	40,000

Using the direct method, the total amount of overhead allocated to each machine hour at Rochester Manufacturing would be

A. $8.00.
B. $2.40.
C. $15.65.
D. $5.25.

A. This is the machining department's overhead cost per machine hour, not the total amount of overhead allocated to each machine hour.

B. This is the maintenance cost per machine hour, not the total amount of overhead allocated to each machine hour.

C.

Under the direct method the service department costs are not allocated to other service departments. As such, we need to make certain that when we determine the ratio to allocate the costs to the production departments, we do not include the usage by the other service departments.

In order to determine the amount of overhead allocated for each machine hour, we will need to allocate the service department costs to the production departments, especially machining. We will then add the machining department's overhead to the overhead allocated to it, and divide this by the number of machine hours.

The assembly department used QC 7,000 hours and the machining department used QC 21,000 hours. Thus, machining will get 75% (or $262,500) of the QC costs. Assembly used the maintenance department a total of 12,000 hours and machining used the maintenance department for 18,000 hours. Thus, machining will get 60% of the maintenance costs (or $120,000).

In total, therefore, the machining department received $382,500 from the service departments. Adding to this the $400,000 of overhead that the machining department incurred itself, there is $782,500 that needs to be allocated to the 50,000 machine hours. This comes out to a rate of $15.65 per machine hour.

D. This is the quality control cost per machine hour, not the total amount of overhead allocated to each machine hour.

Question 11 - CIA 594 III-77 - Service Cost Allocation

A company has two service departments, Power and Maintenance, and two production departments, Machining and Assembly. All costs are regarded as strictly variable. For September the following information is available:

| | Service Departments | | Production Departments | |
	Power	*Maintenance*	*Machining*	*Assembly*
Direct costs	$62,500	$40,000	$25,000	$15,000
Actual activity:				
Kilowatt hrs.		50,000	150,000	50,000
Maintenance hours	250		1,125	1,125

Assume the company uses the sequential or step method for allocating service department costs to production departments. The company begins with the service department, which receives the least service from other service departments. What dollar amount of Power Department costs will be allocated to the Maintenance Department for September?

A. $8,000
B. $0
C. $12,500
D. $6,250

A. This answer is incorrect.

B. Under the step method some service department costs are allocated to the other service departments. Since the Power Department receives less 'service' from the Maintenance Department than it provides to the Maintenance Department, the Power Department is allocated first. Some of the Power Department costs will be allocated to the Maintenance Department.

C. Under the step method the costs of the service departments are allocated one by one. The costs of a service department will be allocated to the production department and to any service department whose costs have not yet been allocated. We are told that the service department that receives the least services

from the other service department will be allocated first. In this question, we need to allocate the Power Department first since it receives only 10% of the Maintenance Department work, and the Maintenance Department uses 20% of the power. So, the costs of the Power Department need to be allocated to the Maintenance Department and the production departments. In total, the Power Department provided 250,000 kilowatt hours and the Maintenance Department used 50,000, or 20% of those hours. The Maintenance Department will then receive 20%, or $12,500 of the Power Department costs.

D. This answer is incorrect.

Question 12 - CMA 691 3-20 - Service Cost Allocation

The managers of Rochester Manufacturing are discussing ways to allocate the cost of service departments such as Quality Control and Maintenance to the production departments. To aid them in this discussion, the controller has provided the following information:

	Quality Control	Maintenance	Machining	Assembly	**Total**
Budgeted overhead costs before allocation	$350,000	$200,000	$400,000	$300,000	$1,250,000
Budgeted machine hours			50,000		50,000
Budgeted direct labor hours				25,000	25,000
Budgeted hours of service:					
Quality control		7,000	21,000	7,000	35,000
Maintenance	10,000		18,000	12,000	40,000

If Rochester Manufacturing uses the reciprocal method of allocating service costs, the total amount of quality control costs (rounded to the nearest dollar) to be allocated to the other departments would be

A. $350,000.
B. $336,842.
C. $421,053.
D. $284,211.

A. This answer is incorrect.

B. This answer is incorrect.

C.

The reciprocal method requires the usage of two formulas. The two formulas are based on the total costs that each service department incurred and are: QC = $350,000 + .25M and M = $200,000 + .20QC.

Now, we can solve this for either variable by substituting one equation into the other. We will solve for QC (because this is what the question asks for), as follows:

QC = $350,000 + .25($200,000 + .20QC)

QC = $350,000 + $50,000 + .05QC

.95QC = $400,000

QC = $421,053.

This is the amount of costs that the QC department must allocate, including to the maintenance department.

D. This answer is incorrect.

Question 13 - CMA 1295 3-15 - Service Cost Allocation

Because this allocation method recognizes that service departments often provide each other with interdepartmental service, it is theoretically considered to be the most accurate method for allocating service department costs to production departments. This method is the

A. Linear method.
B. Reciprocal method.
C. Variable method.
D. Direct method.

A. The linear method is not a method of allocating service department costs.

B. The reciprocal method recognizes the services that are provided by one service department to the other service departments. As a result of this, it is considered to be the most theoretically accurate method of allocating service department costs to the production department.

C. The variable method is not a method of allocation of service department costs.

D. The direct method does not recognize the services that are provided by one service department to another service department.

Question 14 - CMA 1295 3-16 - Service Cost Allocation

When allocating service department costs to production departments, the method that does not consider different cost behavior patterns is the

A. Direct method.
B. Step method.
C. Reciprocal method.
D. Single-rate method.

A. The direct method is able to use different methods of allocating the costs of the service departments to the production departments.

B. The step method is able to use different methods of allocating the costs of the service departments to the production departments.

C. The reciprocal method is able to use different methods of allocating the costs of the service departments to the production departments.

D. When a single rate of overhead allocation is used, it does not take into account the different usage of the service departments by the different production departments. Though this method is simple and easy, it is not very accurate and should only be used if all of the production departments use the service departments equally.

Question 15 - CMA 697 3-6 - Service Cost Allocation

The Photocopying Department provides photocopy services for both Departments A and B and has prepared its total budget using the following information for next year.

 Fixed costs $100,000
 Available capacity   4,000,000 pages
 Budgeted usage

Department A   1,200,000 pages
Department B   2,400,000 pages
Variable cost $0.03 per page

Assume that the single-rate method of cost allocation is used and the allocation base is budgeted usage. How much photo copying cost will be allocated to Department B in the budget year?

A. $132,000
B. $122,000
C. $138,667
D. $72,000

A. This answer allocates the fixed costs at a rate calculated using the capacity, not the budgeting usage.

B. This answer allocates the fixed costs equally between the two departments.

C. If the only allocation base is the budgeted usage, then Department B will receive 2/3 of the fixed costs since they use 2/3 of the printing services. This is $66,667. In addition to the fixed costs, though, they will also receive a charge of $.03 per page that they are budgeted to print. Since they were budgeted to print 2,400,000 pages, this variable charge is $72,000. So, in total Department B will be charged $138,667.

D. This is the variable charge for Department B and does not include the fixed charge they will receive.

Question 16 - CIA 594 III-76 - Service Cost Allocation

A company has two service departments, Power and Maintenance, and two production departments, Machining and Assembly. All costs are regarded as strictly variable. For September the following information is available:

	Service Departments		**Production Departments**	
	Power	*Maintenance*	*Machining*	*Assembly*
Direct costs	$62,500	$40,000	$25,000	$15,000
Actual activity:				
Kilowatt hrs.		50,000	150,000	50,000
Maintenance hours	250		1,125	1,125

If the company uses the direct method for allocating service departments costs to production departments, what dollar amount of Power Department cost will be allocated to the Maintenance Department for September?

A. $17,544
B. $0
C. $12,500
D. $15,625

A. Under the direct method the costs of one service department are not allocated to the other service departments. The costs of the service departments are allocated only to the production departments.

B. Under the direct method the costs of one service department are not allocated to the other service departments. The costs of the service departments are allocated only to the production departments. Therefore, $0 will be allocated from the Power Department to the Maintenance Department.

C. Under the direct method the costs of one service department are not allocated to the other service departments. The costs of the service departments are allocated only to the production departments.

D. Under the direct method the costs of one service department are not allocated to the other service departments. The costs of the service departments are allocated only to the production departments.

Question 17 - CIA 1190 IV-3 - Service Cost Allocation

A corporation allocates indirect corporate overhead costs to its operating divisions. The company uses a cause-and-effect criterion in the selection of appropriate allocation bases. Which of the following would be an appropriate allocation base to assign the costs of the corporate personnel department to the operating divisions using a cause-and-effect criterion?

A. Square footage of space occupied by each division.
B. Total book value of identifiable division assets.
C. Number of employees in each division.
D. Total service years of employees in each division.

A. Square footage of space would not be a cause and effect criteria for the allocation of the personnel department costs.

B. Total book value of division assets would not be a cause and effect criteria for the allocation of the personnel department costs.

C. Presumably the cost driver for the personnel department would be the number of employees, and therefore this is the most cause and effect method of allocating the personnel department costs.

D. Though the number of service years is a personnel related measure, how long someone has worked would not significantly impact the amount of time the personnel department spends on employees in each division.

Question 18 - CMA 1290 3-2 - Service Cost Allocation

Allocation of service department costs to the production departments is necessary to

A. Determine overhead rates.
B. Control costs.
C. Maximize efficiency.
D. Coordinate production activity.

A. The costs of the service departments are costs of the company and they must be allocated to the individual units that are produced. These are overhead costs that will be charged to the production departments and then the individual units. These service department costs are not production costs and allocating them internally to units produced does not change the fact that for external financial reporting purposes, the service department costs are period costs and are expensed as incurred. This allocation of service costs is strictly an internal function that is used for decision-making (allocation of resources, pricing, etc.).

B. The allocation of the service department costs does not directly assist in the controlling of costs.

C. The allocation of the service department costs does not maximize efficiency.

D. The allocation of the service department costs does not assist in the coordination of production activities.

Question 19 - CMA 1293 3-2 - Service Cost Allocation

The most accurate method of allocating service department costs is the

A. Reciprocal method.
B. Accretion method.

C. Step method.
D. Direct method.

A. The reciprocal method is the most accurate method of allocating service department costs because it takes into account all of the services that are provided by one service department to other service departments.

B. The accretion method is not a method of allocating the costs of the service departments.

C. The step method allocates some service department costs to other service departments, but does not allocate them back to those service departments already allocated.

D. The direct method does not consider any services provided by one service department to another service department. Therefore, though quick and easy, the direct method does not provide the most accurate allocation of the costs of the service departments.

Question 20 - CIA 596 III-83 - Service Cost Allocation

Fabricating and Finishing are the two production departments of a manufacturing company. Building Operations and Information Services are service departments that provide support to the two production departments as well as to each other. The company employs departmental overhead rates in the two production departments to allocate the service department costs to the production departments. Square footage is used to allocate building operations, and computer time is used to allocate information services.

The costs of the service departments and relevant operating data for the departments are as follows:

	Building Operations	Information Services	Fabricating	Finishing
Costs:				
Labor and benefit costs	$200,000	$300,000		
Other traceable costs	350,000	900,000		
Total	$550,000	$1,200,000		
Operating Data:				
Square feet occupied	5,000	10,000	16,000	24,000
Computer time (in hours)	200		1,200	600

If the company employs the step method to allocate the costs of the service departments and if information services costs are allocated first, then the total amount of service department costs (Information Services and Building Operations) allocated to finishing would be

A. $730,000
B. $762,000
C. $657,000
D. $681,600

A. This answer uses the direct method to allocate the costs of both departments.

B.

Under the step method we will first allocate the costs of the information service department to all of the other departments (including building operations) and then we will allocate the building operations costs (their own costs plus their share of the information services costs) to the production departments.

The information services costs are $1,200,000 and the usage of their services totaled 2,000 computer hours. Of the total information services costs, 10% ($120,000) will be allocated to building operations and 30%

($360,000) to the finishing department. This allocation means that there is now $670,000 of costs in the building operations department that need to be allocated to the production department. The finishing department occupies 60% of the building space that is occupied by production departments (we do not include the information services department since no costs will be allocated to it). The share of the costs that is allocated to the finishing department from building operations is $402,000. This is added to the $360,000 that was allocated to the finishing department from the information services department, giving a total of $762,000 allocated to the finishing department.

C. This answer is incorrect. See correct answer for an explanation.

D. This answer allocates some of the building operations costs to the information services department.

Question 21 - CIA 1193 IV-3 - Service Cost Allocation

A large manufacturing company has two service departments and two production departments. Each of the service departments renders services to each other and to the two production departments. Which one of the following methods would most accurately allocate the costs of the service departments to the production departments of this company?

A. The direct allocation method.
B. The linear allocation method.
C. The step-down allocation method.
D. The reciprocal allocation method.

A. The direct method does not consider any services provided by one service department to another service department. Therefore, though quick and easy, the direct method does not provide the most accurate allocation of the costs of the service departments.

B. This is not a method of allocating the costs of the service departments.

C. The step-down method allocates some service department costs to other service departments, but does not allocate them back to those service departments already allocated.

D. The reciprocal method is the most accurate method of allocating the service department costs because it considers all of the services that the service departments provide to each other.

Question 22 - CMA 691 3-18 - Service Cost Allocation

The managers of Rochester Manufacturing are discussing ways to allocate the cost of service departments such as Quality Control and Maintenance to the production departments. To aid them in this discussion, the controller has provided the following information:

	Quality Control	Maintenance	Machining	Assembly	Total
Budgeted overhead costs before allocation	$350,000	$200,000	$400,000	$300,000	$1,250,000
Budgeted machine hours			50,000		50,000
Budgeted direct labor hours				25,000	25,000
Budgeted hours of service:					
Quality control		7,000	21,000	7,000	35,000
Maintenance	10,000		18,000	12,000	40,000

If Rochester Manufacturing decides not to allocate service costs to the production departments, the overhead allocated to each direct labor hour in the Assembly Department would be

A. $12.00.

B. $3.20.
C. $3.50.
D. $16.00.

A. This is a very simple question, but we need to recognize it as simple. We simply need to divide the assembly costs by the number of direct labor hours. $300,000 ÷ 25,000 = $12.

B. This answer is incorrect.

C. This answer is incorrect.

D. This is the machining department's budgeted overhead cost divided by the assembly department's budgeted direct labor hours.

Question 23 - CMA 697 3-8 - Service Cost Allocation

M&P Tool has three service departments that support the production area. Outlined below is the estimated overhead by department for the upcoming year.

Service Departments	Estimated Overhead	Number of Employees
Receiving	$25,000	2
Repair	35,000	2
Tool	10,000	1

Production Departments

Assembly	25
Bolting	12

The Repair Department supports the greatest number of departments, followed by the Tool Department. Overhead cost is allocated to departments based upon the number of employees.

Using the direct method of allocation, how much of the Repair Department's overhead will be allocated to the Tool Department?

A. $0
B. $875
C. $11,667
D. $7,000

A. Under the direct method the costs of one service department are not allocated to the other service departments.

B. Under the direct method the costs of one service department are not allocated to the other service departments.

C. Under the direct method the costs of one service department are not allocated to the other service departments.

D. Under the direct method the costs of one service department are not allocated to the other service departments.

Question 24 - CMA 697 3-7 - Service Cost Allocation

The Photocopying Department provides photocopy services for both Departments A and B and has prepared its total budget using the following information for next year.

Fixed costs	$100,000

Available capacity 4,000,000 pages
Budgeted usage
Department A   1,200,000 pages
Department B   2,400,000 pages
Variable cost $0.03 per page

Assume that the dual-rate cost allocation method is used and the allocation basis is budgeted usage for fixed costs and actual usage for variable costs. How much cost would be allocated to Department A during the year if actual usage for Department A is 1,400,000 pages and actual usage for Department B is 2,100,000 pages?

A. $75,333
B. $42,000
C. $72,000
D. $82,000

A. In the allocation of the fixed costs, Department A will receive 1/3 of the fixed costs since they use 1/3 of the printing services. This is $33,333. In addition to the fixed costs, though, they will also receive a charge of $.03 per page based on their actual usage. Since they printed 1,400,000 pages, this variable charge is $42,000. So, in total Department A will be charged $75,333.

B. This is the variable cost that is charged to Department A.

C. This is the amount that is allocated to Department B if only a single rate is used.

D. This answer allocates the fixed costs based on the actual quantities printed instead of the budgeted pages.

Question 25 - CIA 590 IV-8 - Service Cost Allocation

A public accounting firm has two departments, Auditing Services (AS) and Tax Services (TS). These two departments use the services of two service departments, Computer Programming (CP) and Computer Operations (CO). The percentages of each service used by each department for a typical period are:

	CP	CO	AS	TS
CP		30%	50%	20%
CO	25%		45%	30%

The company prices its auditing services and tax services on the basis of estimated costs of providing those services. Based upon this information, the most appropriate method for allocating service department costs is the

A. Step-down method.
B. Physical-units method.
C. Massachusetts Formula.
D. Reciprocal method.

A. The step down method would be appropriate if one of the service departments did not use the services of the other service department. However, since both service departments use each other, this method is not the most appropriate.

B. This is a method for allocating joint costs, not for allocating the overhead of service departments.

C. The Massachusetts Formula is not covered on the CMA Exams.

D. Because the service departments use each other, the best method of allocating the service department overhead is the reciprocal method. This allocates costs from the service departments to each other, and then to the production departments.