

- 3 Winston Ltd had estimated the following factory indirect costs for its financial year ended 30 April 2012.

	\$
Indirect wages	2 120 000
Repairs and maintenance of machinery	410 000
Rent and rates	53 000
Machinery insurance	24 000
Premises insurance	28 000
Electricity – power	48 000
Depreciation of machinery	14 000
Consumables	21 150

The company calculated a suitable overhead absorption rate for each of its two production departments using the following information.

	Production departments		Service departments	
	Machining	Assembly	Maintenance	Canteen
Machine cost (\$)	617 500	332 500	–	–
Direct machine hours	202 500	22 500	–	–
Direct labour hours	55 500	314 500	–	–
Floor area (square metres)	9 000	8 000	2 000	1 000
Power usage (%)	55	35	5	5
Number of employees	70	104	16	10
Consumables (\$)	9 550	9 800	550	1 250

The proportion of work done by each service department was:

	Machining	Assembly	Maintenance
Canteen (%)	35	60	5
Maintenance (%)	80	20	–

**REQUIRED**

**(a)** Complete the following table to calculate the total overheads for **each** production cost centre.

Cost	Basis	Machining	Assembly	Maintenance	Canteen

[12]

**(b)** Calculate the appropriate overhead absorption rate for each production department.

Machining .....  
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Assembly .....  
.....

[4]

The actual results for the year ended 30 April 2012 were as follows:

	Machining	Assembly
Factory indirect costs (\$)	1 410 000	1 312 000
Direct machine hours	195 000	21 000
Direct labour hours	57 000	318 000

**REQUIRED**

- (c) Calculate the amount of overhead which would be over or under-absorbed by each production department.

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- (d) Explain how the results in (c) could have occurred.

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(e) Explain the problems associated with using predetermined overhead absorption rates in calculating the price of a product.

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[6]