

- 3 Highlander Limited has two production departments, Machining and Assembling, and one service department, Maintenance.

The following estimates had been made for year 1.

Annual budgeted information

	Machining	Assembling	Maintenance	Total
Number of employees	160	120	120	400
Floor area (square metres)	7 000	5 000	4 000	16 000
Power (kilowatt hours)	70 000	52 500	17 500	140 000
Direct machine hours	14 000	400	-	14 400
Direct labour hours	1 000	6 000	-	7 000
	\$	\$	\$	\$
Indirect material	300	268	320	888
Indirect wages	2 720	1 480	860	5 060
Value of machinery	52 000	48 000	-	100 000

Annual budgeted overheads

	\$
Rent	12 800
Machinery depreciation	10 000
Power	7 200
Supervision of employees	6 400
Indirect materials	888
Indirect labour	<u>5 060</u>
Total overheads	<u>42 348</u>

REQUIRED

- (a) Apportion the budgeted overheads to the three departments and re-apportion the maintenance department costs to the two production departments on the basis of the value of machinery.

Overhead Analysis Sheet

Overheads	Basis of Apportionment	Machining	Assembling	Maintenance	Totals
		\$	\$	\$	\$
Rent	floor area				
Machinery depreciation	value of machinery				
Power	kw hours				
Supervision of employees	number of employees				
Indirect materials	allocated				
Indirect labour	allocated				
re-apportionment of maintenance department overheads					

Additional information

The Machining department overhead absorption rate is applied on a machine hour basis.
The Assembling department overhead absorption rate is applied on a direct labour hour basis.

REQUIRED

- (b) Calculate overhead absorption rates for each of the **two** production departments.
Calculations should be to **two** decimal places.

- (i) Machining department

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- (ii) Assembling department

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Additional information

The following information relates to Job 68 which was completed during year 1.

	Machining	Assembling
	\$	\$
Direct materials	3 500	100
Direct labour	500	1 400
Machine hours	100	10
Direct labour hours	20	60

REQUIRED

- (c) (i) Prepare a statement to show the total cost of Job 68.
Clearly identify the prime cost and the total overhead cost.

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- (ii) Calculate the selling price of Job 68 if the profit margin is 20% of selling price.
Round-up your answer to the nearest whole number.

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Additional information

At the end of year 1 the **estimated** cost figures were compared with the **actual** cost figures.

Machining department

Indirect wages amounted to \$2020 and not the \$2720 estimated.

Assembling department

Actual direct labour hours used in the department totalled 5570 hours and not the 6000 hours estimated.

REQUIRED

(d) Explain the meaning of the following terms. Illustrate your answer by reference to the additional information and, where appropriate, your answer to part (b).

(i) Overhead over absorption

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(ii) Overhead under absorption

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