

- 4 X Limited is a manufacturing business operating two production departments, Machining and Finishing and two service departments, Stores and Maintenance.

All overhead costs have already been allocated to the departments. The service department costs are to be apportioned to production departments as follows:

Stores department: in proportion to the number of parts orders

Maintenance department: in proportion to the number of maintenance call-outs.

The following budgeted information was available for the year ended 30 September 2022.

	Machining department	Finishing department	Maintenance department
Direct labour hours	11 500	54 600	—
Machine hours	48 000	12 000	—
Number of parts orders	6 400	1 800	300
Number of maintenance call-outs	120	30	—

REQUIRED

- (a) Complete the table to apportion the service department costs to production departments.

	Total \$	Production departments		Service departments	
		Machining \$	Finishing \$	Stores \$	Maintenance \$
Allocated overheads	803 900	288 500	515 400	—	—
Indirect labour	459 000	106 000	52 000	70 000	231 000
Other indirect costs	360 000	114 000	56 000	78 000	112 000
Total overheads	1 622 900	508 500	623 400	148 000	343 000

- (b) Calculate, to **two** decimal places, a suitable overhead absorption rate for **each** production department.

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Additional information

The actual results for the year ended 30 September 2022 were as follows:

	Machining	Finishing
Total overheads	\$910 000	\$705 000
Direct labour hours	12 100	51 800
Machine hours	49 200	10 900

REQUIRED

- (c) Calculate the over-absorption or under-absorption of overheads for **each** production department.

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- (d) State **two** possible reasons why a business may **under** absorb overheads.

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Additional information

The total budgeted direct labour cost for the production departments for the year ended 30 September 2022 was \$594 900.

REQUIRED

- (e) Calculate the budgeted hourly direct labour rate for the production departments.

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Additional information

X Limited have been asked to supply a quotation for a customer who requires 50 units of a product. Each unit would require the following:

Direct material	4 kilos at \$2.45 per kilo
Direct labour	Machining department – 3 hours
	Finishing department – 4.5 hours
Overheads	Machining department
	2 direct labour hours
	1.25 machine hours
	Finishing department
	2.5 direct labour hours
	1.75 machine hours

The machining department is working at full capacity, so an overtime premium of 25% would be required to complete this work.

X Limited would require a profit margin of 25% on this work.

REQUIRED

(f) Prepare a statement to show the **total** selling price that X Limited will quote to the customer.

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(g) Explain why a business apportions service department costs to production departments.

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Additional information

The directors of X Limited have been advised that they should change from a departmental overhead absorption rate to one factory-wide rate. They are concerned that this may affect the profits of the business.

REQUIRED

(h) Advise the directors whether or not they should make this change. Justify your answer.

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