

- 4 Andreas owns a business manufacturing bicycles. The business operates two production departments, Machining and Assembly, and two service departments, Stores and Maintenance.

The following information is available for **one** bicycle.

Direct materials	\$45.60
Direct labour: Machining (\$10 per hour)	30 minutes
Direct labour: Assembly (\$12 per hour)	105 minutes
Machine hours: Machining	20 minutes
Machine hours: Assembly	15 minutes

Total budgeted overheads for the year ended 31 August 2023 are as follows:

	\$
Indirect wages	420 000
Factory rent and rates	30 000
Machine overheads	22 000

The following information is also available.

	Production departments		Service departments	
	Machining	Assembly	Stores	Maintenance
Floor space (square metres)	4 000	5 600	1 800	600
Number of orders from stores	2 100	1 600		500
Maintenance call outs	210	40		
Budgeted direct labour hours	22 200	77 700		
Budgeted machine hours	34 300	25 700		
Number of indirect employees	4	12	2	2

Machine overheads are apportioned on the basis of machine hours.

Additional information

The actual results for the year ended 31 August 2023 were as follows:

	Machining	Assembly
Total overheads	\$226 952	\$267 465
Direct labour hours	28 450	72 580
Machine hours	44 120	15 270

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

.....

.....

.....

.....

.....

..... [4]

Additional information

Andreas has been approached by a new customer wishing to make a special order for 120 bicycles with modifications to the customer's own specification. In order to complete the order, the following would apply for the manufacture of one bicycle.

- 1 The total material cost would increase by 30%.
- 2 The direct labour hours in the machinery department would increase by 50% and an additional 15 minutes of direct labour hours would be required in the assembly department.
- 3 Due to workers in the assembly department already working at full capacity, these workers would have to work overtime to complete the order at a premium of 25% on the usual direct labour rate.

- (d) Calculate the **direct cost** of producing **one** bicycle for the special order.

.....

.....

.....

.....

.....

..... [4]

Additional information

In order to remain competitive, Andreas wishes to achieve a 30% gross profit margin on all work.

- (e) Prepare a statement to show the total selling price that Andreas should quote to the customer in order to achieve a 30% gross profit margin on the order.

[5]

Additional information

Having received the quotation from Andreas, the customer has stated that he will commit to a regular monthly order of 100 of the special bicycles if Andreas will offer a 10% discount on the quoted price and allow 2 months' credit.

Andreas's business is successful, though managing cash flow is often difficult.

- (f) Advise Andreas whether he should accept the terms offered by the customer. Justify your answer.

This image shows a full page of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page, providing a template for handwriting practice or general writing. There are no margins, text, or other markings on the page.