

- 4 K Limited is a manufacturing company which has two production departments and one service department at one of its factories. At this factory absorption costing is used.

REQUIRED

(a) Define **each** of the following terms:

(i) cost centre

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 [1]

(ii) allocation of overheads

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 [1]

(iii) apportionment of overheads.

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 [1]

Additional information

The following budgeted information is available for the year ended 31 August 2022.

	Production departments		
	Cutting \$	Finishing \$	Service department \$
Factory overheads	273 820	189 240	31 350

The service department's overheads are reapportioned on the basis of the number of employees in each production department.

	Cutting department	Finishing department
Number of employees	125	84

REQUIRED

(b) Reapportion the service department's overheads to the production departments.

	Cutting department \$	Finishing department \$	Service department \$
Factory overheads	273 820	189 240	31 350
Reapportionment			
Total overheads			

[2]

Additional information

The following forecast information is available for the year ended 31 August 2022.

	Cutting department	Finishing department
Direct labour hours per annum	9 400	7 420
Machine hours per annum	17 900	3 840

REQUIRED

(c) Calculate an appropriate overhead absorption rate, correct to **two** decimal places, for **each** production department:

(i) Cutting department

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..... [1]

(ii) Finishing department.

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..... [1]

Additional information

The actual results for the year ended 31 August 2022 were as follows:

	Cutting department	Finishing department
Factory overheads	\$312 600	\$193 400
Direct labour hours	9 800	7 210
Machine hours	17 200	4 220

- (d) Calculate the under-absorption or over-absorption of factory overheads for each production department for the year ended 31 August 2022.

- (i) Cutting department

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..... [3]

- (ii) Finishing department

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..... [3]

Additional information

At a second factory marginal costing is used.

A single product, Product X, is manufactured. However, demand for this product has fallen recently due to increased competition.

The following information is available for Product X.

Per unit	\$
Direct materials	22
Direct labour	18
Contribution	20

Normal capacity is 14 000 units per month. The factory is currently operating at 75% of normal capacity. All the units produced are sold. Fixed costs per month are \$56 000.

(e) Calculate the profit for one month.

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..... [1]

Additional information

The directors are considering two options to increase profits.

Option A:

- 1 Reduce the selling price per unit by 5%.
- 2 Run a six-month advertising campaign at a cost of \$1100 per month.
- 3 Monthly sales are forecast to increase by 25% on current levels.

Option B

- 1 Discontinue manufacture of Product X.
- 2 Produce a different product, Product Y, with a selling price of \$58 per unit.
- 3 It is forecast that demand will be such that the factory can operate at 110% normal capacity.
- 4 Direct material cost will increase by 10% per unit.
- 5 Direct labour costs will remain unchanged. However, workers will be paid an overtime premium of 50% for all work over normal capacity.
- 6 Machinery will need some alterations which will cost \$54 000. Non-current assets are depreciated by 25% per annum.
- 7 The company will need to borrow \$30 000 to finance the cost of the machinery alterations. Interest at 6% per annum will be charged on this loan.

REQUIRED

(f) Calculate the profit to be made on **each** option in the first month of production.

(i) Option A

[3]

(ii) Option B

[6]

