4 Mandeep owns two manufacturing businesses.

REQUIRED

(a) State what is meant by:

(i) Variable costs

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(ii) Fixed costs

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(iii) Semi-variable costs

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Additional information

One of Mandeep's businesses manufactures three products, Ess, Tee and Ewe. The following monthly budgeted information is available for December 2022.

Per unit	Ess	Tee	Ewe
Selling price	$90	$105	$150
Contribution	$41.50	$45.00	$55.20
Maximum monthly demand	80 units	50 units	75 units

Budgeted fixed overheads are absorbed at $14 per unit based on maximum monthly demand.

REQUIRED

(b) Calculate the **total** maximum contribution **and** also **total** maximum profit that Mandeep can earn in December 2022.

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Additional information

The business uses the same material to manufacture Ess, Tee and Ewe. The following information is available for direct material.

Per unit	Ess	Tee	Ewe
Direct material ($6 per metre)	5 metres	6 metres	8 metres

REQUIRED

(c) Calculate the total material **(in metres)** required to meet the maximum demand in December 2022.

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Additional information

Mandeep has been told that due to a national shortage of material, he will only be able to obtain 1000 metres of material each month for the next three months.

REQUIRED

(d) Prepare a statement to show the maximum contribution **and** also maximum profit that Mandeep can earn in December 2022 taking account of the shortage of material.

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Additional information

Mandeep made enquiries and found an overseas supplier who would be able to provide enough material to meet his requirements each month. Mandeep has never used this supplier before. He has been assured that the material will be of a similar quality to his current supply and that the price would be $5 per metre.

REQUIRED

(e) Advise Mandeep whether or not he should purchase **all** future supplies of material from the overseas supplier. Justify your answer.

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Additional information

Mandeep is currently preparing budgets for his **other business** for the next year.

He operates a system of absorption costing and provides the following information for one unit of product.

Direct material	6 kg at $4.80 per kg
Direct labour	Machining department 2 hours at $9 per hour
	Assembly department 3 hours at $8 per hour
Overheads	Machining department 2 direct labour hours 3 machine hours
	Assembly department 3 direct labour hours 0.5 machine hours

Overhead absorption rates	
Machining department	$6.75 per machine hour
Assembly department	$4.60 per direct labour hour

REQUIRED

(f) Calculate the price per unit that Mandeep should charge customers in order to obtain a 20% profit margin.

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(g) State **three** benefits to a business of preparing budgets.

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(h) State **two** limitations of budgetary control.

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