4 S Limited manufactures three different products.

The following budgeted information is available:

Products	A	B	C
	$	$	$
Monthly sales revenue	72 000	27 000	165 000
Unit costs			
Direct materials ($1 per kilo)	6	9	3
Direct labour	2	7	8
Variable overheads	1	2	1
Selling price per unit	18	27	33

Total monthly fixed overheads are expected to be $138 000.

The directors of S Limited have been informed that only $39 000 worth of direct materials would be available in December 2017.

All products use the same type of direct material and no price increase would occur due to the shortage. No changes are anticipated in selling prices, fixed overheads or unit variable costs.

Due to an increased demand, the directors do not want to discontinue any of the products and wish to produce a minimum of 1000 units of each.

REQUIRED

(a) Prepare a statement to show the maximum budgeted profit the company will make in December 2017 taking into account the shortage in materials and minimum production requirement.

	Product A	Product B	Product C
Contribution per unit ($)			
Contribution per limiting factor ($)			
Ranking			

Budgeted profit statement for December 2017

	Production (units)	Contribution per unit $	Total $
Product A			
Product B			
Product C			
Total contribution			
Less: Fixed overheads			
Budgeted profit / loss			

[11]

(b) Prepare a statement to show the maximum budgeted profit the company will make in December 2017 taking into account the shortage in materials but **without** the minimum production requirement.

Budgeted profit statement for December 2017

	Production (units)	Contribution per unit $	Total $
Product A			
Product B			
Product C			
Total contribution			
Less: Fixed overheads			
Budgeted profit / loss			

[6]

(c) Advise the directors of S Limited whether or not they should produce a minimum of 1000 units of each product. Justify your answer.

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(d) Define the term 'margin of safety'.

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(e) Explain the usefulness of margin of safety to a company.

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