3 Clarke Limited manufactures one product, the Apex. The following forecast information for the Apex is available for the year ending 31 December 2014:

Per unit:	
Selling price	$45.50
Direct material ($4 per metre)	$14.00
Direct labour ($12 per hour)	$18.00
Variable production overhead	$ 3.00
Sales demand	4 000 units

Fixed overheads are forecast to be $23 100 for the year.

REQUIRED

(a) Calculate the breakeven point in units for the sales of the Apex.

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(b) Calculate the margin of safety for the Apex in terms of revenue.

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Clarke Limited has decided to introduce two new products in addition to the Apex; the Bond and the Cord. Both products use the same direct material and the same grade of direct labour as the Apex. The following forecast information is available for the year ending 31 December 2014:

Per unit:	Bond	Cord
Selling price	$52.00	$67.50
Direct material ($4 per metre)	$16.00	$20.00
Direct labour ($12 per hour)	$24.00	$30.00
Variable production overhead	$ 4.00	$ 5.00
Sales demand	6 000 units	2 000 units

Fixed overheads are expected to double as a result of producing all three products.

REQUIRED

(c) Calculate the contribution per unit of the Bond and the Cord.

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(d) Calculate the total quantity of direct material required by Clarke Limited for the year ending 31 December 2014.

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(e) Clarke Limited has been told that due to a shortage of direct material, only 40 000 metres will be available for the year. Calculate the maximum forecast profit for Clarke Limited for the year ending 31 December 2014 using 40 000 metres of direct material.

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(f) Explain why profit calculated using marginal costing would be different to that calculated using absorption costing.

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