3 Cumfycars Ltd produce 3 grades of car seat covers, Basic, Deluxe and Super. Each seat cover is manufactured using a different grade of material.

Sales demand for the year ended 30 April 2013 is forecast to be:

	Basic	Deluxe	Super
Sales demand (units)	4000	2000	500

The following figures are available:

Per Unit	Basic	Deluxe	Super
Sales price	$12	$20	$30
Variable costs	$6	$14	$16
Direct labour hours	3	5	8

Total fixed overhead costs for the year ending 30 April 2013 are estimated to be $39 000.

Fixed overhead costs are absorbed on the basis of direct labour hours.

REQUIRED

(a) **(i)** Calculate the total direct labour hours required to meet the forecast demand for all 3 products.

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(ii) Calculate the estimated fixed overhead recovery rate.

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(iii) Calculate the estimated contribution per unit for each product.

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(iv) Calculate the estimated contribution per direct labour hour for **each** product.

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The human resource manager has warned of a future skill shortage and forecasts that only 24 400 direct labour hours will be available for the year ended 30 April 2013.

(b) Calculate the quantity of each product that should be made in order to maximise total profit if this forecast is correct.

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(c) **(i)** Prepare a statement showing the **net** profit or loss made by **each** product (Basic, Deluxe and Super) for the year ending 30 April 2013.

[7]

(ii) Using the estimated fixed overhead recovery rate calculated in **(a) (ii)** clearly show any fixed overhead over/under-absorbed.

[3]

Cumfycars Ltd also produce car roof racks in separate premises.

The total forecast fixed costs for the year ending 30 April 2013 amount to $10 000.

Each roof rack has the following unit costs:

Unit costs	$
Raw materials	40
Direct labour	30
Variable Overheads	25

There are no other costs. Each roof rack sells for $100.

REQUIRED

(d) Calculate the estimated break-even point in units **and** in sales revenue.

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(e) Calculate the estimated margin of safety in units **and** revenue if 2200 units are produced.

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