

**3** Rapunzel Ltd produce three types of shampoo: Aloe, Hazel and Peach.

Each shampoo uses the same manufacturing process but contains different ingredients.

The following data is available for the 6 months ended 31 October 2012.

	Aloe	Hazel	Peach
Sales (litres)	120 000	39 000	60 000
Selling price per litre	\$8.00	\$14.00	\$10.00
Direct materials per litre	\$2.70	\$7.80	\$5.36
Variable overheads per litre	\$1.80	\$2.20	\$1.00
Direct labour rate per hour	\$3.20	\$3.20	\$3.20
Output per labour hour (litres)	8	4	5

Total fixed costs of \$477 750 for the 6 months were recovered at the rate of \$13.00 per direct labour hour.

No inventory is kept and all output is sold in the month of production.

**REQUIRED**

- (a) Calculate the total direct labour hours required for the 6 months ended 31 October 2012.

.....

.....

.....

.....

.....

[2]

- [illegible]

[illegible]

[3]

One of the directors suggests that production of the Hazel shampoo should be stopped and resources should be concentrated on the production of the Aloe and Peach shampoos.

If this decision is implemented:

- The sales of Aloe and Peach shampoos are forecast to increase by 10% each;
- There will be no increase in the selling price;
- The rates for variable costs will remain unchanged;
- Higher marketing costs will increase the total fixed costs to \$550 000.

**REQUIRED**

- (d) Prepare a statement showing the expected **net** profit or loss for the Aloe and Peach shampoos and the **total** expected **net** profit for the 6 months ending 30 April 2013.

Using the overhead recovery rate of \$13.00 per direct labour hour clearly show any fixed overhead over/under absorbed.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(e) Based on your calculations in (b) and (d) above, advise the Board of Directors regarding the future production of the range of shampoos.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....