(Show all calculations)

**Question 3 (6 marks)**

Bourbon coffee is one of the most popular Arabica coffees sold in the world. It was first produced on the French island of Île Bourbon and was later taken by the French to Africa and Latin America. The president wants to introduce a new premium line of Bourbon coffee beans and has sourced premium green beans from small producers in the mountainous regions of Brazil. He feels they can charge more for these coffees and has met with the company’s roastmaster and the marketing manager who together have planned three specialty coffees in their new Bourbon Premium line:

* Bourbon Aperitif: A French-roast-level coffee with a deep, intense, smoky-sweet flavour. Best enjoyed after an evening dinner.
* Bourbon Aperitif — Decaf: The decaffeinated version of the Bourbon Aperitif. For those who have to work the next day.
* Bourbon Full City: A medium-roast coffee with a slightly sweet taste.

The roastmaster, along with the production manager and the controller, has developed the following budget for this new product line:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Selling price per kilo** | **Variable cost per kilo** | **Sales mix** |
| **Bourbon Aperitif** | $9.95 | 6.67 | 2 |
| **Bourbon Aperitif - Decaf** | $12.82 | 9.74 | 1 |
| **Bourbon - Full City** | $7.74 | 5.03 | 3 |

Fixed costs allocated to this product line are $145,000 per year.

**Required**

1. Based on the predicted selling price, variable costs and sales mix, how many kilos of each type of coffee should be sold in order for the company to achieve $200,000 of income on sales from this product line?
2. The marketing manager noted that the demand for decaffeinated coffee will grow as baby boomers continue to enjoy the taste of coffee but want to reduce their intake of caffeine. He believes the actual sales mix will be 1:2:3. At this sales mix, how many more kilos of coffee will they have to sell in order to achieve the same level of income as in part (a)?
3. Provide a reason for the difference between the results from parts (a) and (b)