5. Supplier *A* produces a large number of sandwiches and wraps in the ratio 3 : 2

Supplier *B* produces a large number of wraps and paninis in equal quantities.

Two products are selected at random from supplier *A* and **one** product is selected at random from supplier *B*.

(a) List all the possible combinations of the **three** products.

(2)

The selling price of each product is shown in the table below.

The selling price of a wrap is the same for supplier *A* and supplier *B*.

	Sandwich	**Wrap**	**Panini**
Price	£ 3	£ 4	£ 5

The random variable *T* represents the total price, in pounds, of the **three** selected products.

(b) List all the possible values of *T*

(2)

(c) Find the sampling distribution of *T*

(3)

(d) Find the sampling distribution of the range, *R*, of the prices of the **three** selected products.

(3)

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Question 5 continued

(Total for Question 5 is 10 marks)