2. Aarush is asked to estimate the price of 7 kettles and rank them in order of decreasing price.

Aarush's order of decreasing price is *D A F C B G E*

The actual prices of the 7 kettles are shown in the table below.

Kettle	*A*	*B*	*C*	*D*	*E*	*F*	*G*
Price (£)	99.99	14.99	34.97	49.99	19.97	29.99	8.99

(a) Calculate Spearman's rank correlation coefficient between Aarush's order and the actual order.

Use a rank of 1 for the highest priced kettle.
Show your working clearly.

(4)

(b) Using a 5% level of significance, test whether or not there is evidence to suggest that Aarush is able to rank kettles in order of decreasing price.

You should state your hypotheses and critical value.

(4)

(c) Explain why Aarush did not use the product moment correlation coefficient in this situation.

(1)

Aarush discovered that kettle *A*'s price was recorded incorrectly and should have been £49.99 rather than £99.99

(d) Explain what effect this has on the rankings for the price.

(1)

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Question 2 continued

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Question 2 continued

(Total for Question 2 is 10 marks)