1. (a) State two conditions under which it might be more appropriate to use Spearman's rank correlation coefficient rather than the product moment correlation coefficient.

(2)

A random sample of 10 melons was taken from a market stall. The length, in centimetres, and maximum diameter, in centimetres, of each melon were recorded.

The Spearman's rank correlation coefficient between the results was –0.673

(b) Test, at the 5% level of significance, whether or not there is evidence of a correlation. State clearly your hypotheses and the critical value used.

(4)

The product moment correlation coefficient between the results was –0.525

(c) Test, at the 5% level of significance, whether or not there is evidence of a **negative** correlation.
State clearly your hypotheses and the critical value used.

(3)

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Question 1 continued

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Question 1 continued

(Total for Question 1 is 9 marks)