1. The table below gives information about the final positions of 10 football teams in the English Premier League and their average match day attendance for one season. The table also shows some of the average match day attendance ranks.

Team	Final position	Average match day attendance	Average match day attendance rank
Arsenal	5	59 776	2
Brighton and Hove Albion	9	30 988	
Chelsea	3	36 424	
Leicester City	8	32 440	
Liverpool	2	53 027	
Manchester City	1	53 739	
Manchester United	6	72 992	1
Tottenham Hotspur	4	56 523	
West Ham United	7	57 915	
Wolverhampton Wanderers	10	30 725	

(Source from: www.statista.com)

By completing the ranks for average match day attendance,

(a) calculate the value of the Spearman's rank correlation coefficient for these data. Show your working clearly.

(4)

(b) Stating your hypotheses clearly, test at the 1% level of significance, whether or not there is evidence of a positive correlation between the final position of a football team in the English Premier League and its average match day attendance.

(4)

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Question 1 continued

(Total for Question 1 is 8 marks)