1. In a singing competition, 8 singers are judged separately by a jury and by an audience. The jury gives each singer a score out of 30 and the audience ranks the singers from most favourite (1) to least favourite (8). The scores given by the jury and the rankings given by the audience are shown in the table.

Singer	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*
Jury score	28	25	29	24	16	19	27	23
Audience rank	2	1	3	4	7	8	5	6

(a) Calculate Spearman's rank correlation coefficient between the jury's ranking and the audience's ranking.
Use a rank of 1 for the singer with the highest score.
Show your working clearly.

(4)

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

(4)

It was later discovered that the score for singer *F* was recorded incorrectly and is corrected to 16

(c) State what effect this has on the rankings for the scores given by the jury.

(1)

(Total for Question 1 is 9 marks)