1. The table below shows the number of televised tournaments won and the total number of tournaments won by the top 10 ranked darts players in 2020

Player's rank	Televised tournaments won	Total tournaments won
1	55	135
2	7	33
3	5	17
4	2	14
5	4	9
6	2	5
7	9	36
8	0	15
9	3	3
10	0	13

Michael did not want to calculate Spearman's rank correlation coefficient between player's rank and the rank in televised tournaments won because there would be tied ranks.

(a) Explain how Michael could have dealt with these tied ranks.

(1)

Given that the largest number of total tournaments won is ranked number 1

(b) calculate the value of Spearman's rank correlation coefficient between player's rank and the rank in total tournaments won.

(4)

(c) Stating your hypotheses and critical value clearly, test at the 5% level of significance, whether or not there is evidence of a positive correlation between player's rank and the rank in total tournaments won for these darts players.

(4)

Michael does not believe that there is a positive correlation between player's rank and the rank in total number of tournaments won.

(d) Find the largest level of significance, that is given in the tables provided, which could be used to support Michael's claim.
You must state your critical value.

(1)

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(Total for Question 1 is 10 marks)

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