Assignments on counting methods

Assignment 1

Consider the following very simple example. Suppose that in a certain field there are just four publications. These publications have been produced by two different universities, university A and university B. The following table shows for each publication the universities by which the publication has been produced and the number of citations of the publication. Notice that publication 4 has been co-authored by the two universities.

	Universities	No. of cit.
Publication 1	University A	3
Publication 2	University A	6
Publication 3	University B	1
Publication 4	University A; University B	10

Please answer the following questions:

1. What is the MNCS of university A? What is the MNCS of university B?
2. Which university performs better in terms of field-normalized citation impact?
3. How does each university perform compared with the world average? Does this outcome make sense to you? Suppose the president of university B asks you to give your opinion on the performance of his university, what would be your answer?

Now consider an example that involves two fields. There are three publications in field X and three in field Y. There are four universities. The following table shows for each publication the field to which the publication belongs, the universities by which the publication has been produced, and the number of citations of the publication.

	Field	Universities	No. of cit.
Publication 1	Field X	University A	10
Publication 2	Field X	University B	10
Publication 3	Field X	University A; University B	10
Publication 4	Field Y	University C	4
Publication 5	Field Y	University D	4

| Publication 6 | Field Y | University C; University D | 7 |

Please answer the following questions:

4. What is the MNCS of universities A and B? What is the MNCS of universities C and D?
5. Which universities perform best in terms of field-normalized citation impact?
6. How does each university perform compared with the world average?

Assignment 2

Answer the same questions as you did in assignment 1, but this time calculate the MNCS indicator using fractional counting instead of full counting. In addition, please comment on the following questions:

1. What are the main differences between the results obtained using full counting and the results obtained using fractional counting?
2. What do you see as the advantages and disadvantages of each of the two counting methods?
3. The president of your university is very busy and doesn't want to be bothered with technical discussions on different counting methods. He just wants to see some key bibliometric statistics on the performance of his university. Would you present full counting or fractional counting results to him?