

Interview & Personal Statement Tips (4 pages; 26/10/20)

(A) UCAS Personal Statement

(These points are relevant to interviews as well.)

- (1) Begin by explaining why you have applied for the course.
- (2) Show that you have done some research into it.
- (3) Say why certain aspects of the course appeal to you.
- (4) Say what you hope to gain from doing the course; including career aspirations.
- (5) Don't just list what you have done: explain what you have gained from the experience (eg increased understanding; involvement with other people; position of responsibility; learning to persevere).
- (6) Avoid negative statements (eg criticism of School, courses you don't want to do), or comparisons with other universities. (Don't do what Einstein did, and point out mistakes in a professor's published work.)
- (7) Avoid humour.

(B) Interview

[in addition to the points in (A)]

- (1) What the interviewers are looking for:
 - (i) Enthusiasm for the subject.
 - (ii) Capacity to absorb and apply new ideas, and think independently.
 - (iii) Self-motivation and perseverance.

(2) Demonstrate that you are listening.

(3) Don't dodge questions. Ask for clarification, if necessary.

To quote from the Oxford University website:

"If you don't know the answer to a question, you may wish to explain that you haven't covered that topic yet, but do try to work out the answer if you can. Many questions are designed to test your ability to apply logic and reason to an idea you may never have encountered before. ... If you don't understand something - just ask. Tutors are not necessarily so concerned with what you know, but how you think."

(4) Be able to talk about (mathematical) things that interest you - eg from reading or problems tackled. Be aware of any mathematical matters that have been in the news recently. Expect questions on what you say.

To quote from the Oxford University website:

"We may ask you to tell us about an area of mathematics you have studied."

(5) Don't talk for too long.

(6) Types of interview questions:

(i) You may be given some mathematical problems to have a go at just prior to the interview.

(ii) You will almost certainly be presented with a few (previously unseen) mathematical problems in the interview itself. A typical problem might be to sketch a non-standard function.

It is quite usual to be given hints for these problems (to help you make progress), and the interviewers are interested in how you are able to take advantage of these hints. If stuck (as most people will be to some extent), explain your thought processes in tackling the problem. It may be useful to have some standard problem-solving strategies up your sleeve, so that you have something to say initially. (See Additional Materials: "Further Maths Exam Technique".)

To quote from the Oxford University website:

"We may look in detail at a point of technique, or curve sketching; we may ask you 'puzzle' type questions; we may give you a mathematical definition and ask you to work out some of its consequences. We are trying to see how you think when you do Mathematics, and we may ask you to work at the board and to talk us through your thought processes. Although we are good mathematicians, we are not mind-readers - if you do not say anything, we cannot tell what you are thinking about."

(iii) General questions

To quote from the Oxford University website:

"You may be asked what role your subject plays in society."

(7) Preparing for the interview:

(i) Be ready to expand on items in your Personal Statement.

(ii) Tutors are generally keen to see evidence of wider reading, and you could be asked what mathematical books you have read.

(See the "Miscellaneous" page of fmng.uk; also google "Mathematics Reading Lists" - provided by various universities and Oxbridge colleges.) A book that the interviewer hasn't read may be of more interest to them than, say, "A Mathematician's Apology" (though this is very short, so you might as well read it!)

(8) Standard questions:

(i) Why have you applied for this course / to this college / university?

(ii) What do you know about this course / college / university?

(9) Depending on the university, hobbies and non-mathematical interests may be more or less relevant. One Cambridge Admissions tutor (a mathematician) that I spoke to said that, if a candidate did have some hobbies "it wouldn't be held against them"! Make it clear (or at least give the impression) that your degree subject is more important to you than any extra-curricular activities you may get involved in.

(10) There are some videos of interviews (or mock interviews) on Youtube.