General advice for writing research statements

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Your research statement should be about five pages long and should be divided into the following sections:

1. introduction

2. previous results

3. plans for future research

4. bibliography
1. Introduction

- Many readers will only look at the introduction. You should use this section to capture their attention and to quickly convey where your work fits into mathematics.

- Place your work in a broader context, but not too broad. Think about the question: why did people start working on this topic? Then try to distill the answer to one or two sentences. It is great if you can mention some classical or well-known result in this broader context; your audience enjoys a reference to something they know.

- It is also good if you can teach the reader something, although necessarily something modest: try to make a new connection or give some new insight into something he or she may not have previously thought about.
2. Previous Results

- After motivating your work in the introduction, identify the primary challenges you encountered.

- Tell the reader what tools and techniques you used to overcome these challenges. This gives an idea of what expertise you have.

- Give applications of your results, if these exist. If you do not yet know any applications, think about it. If you think of something promising, include it in the next section.

- Your goal is not to convey your proof in its entirety; rather focus on the objectives above.
3. Plans for Future Research

- Start thinking well in advance about this section, and think hard. Writing this statement is a valuable opportunity to evaluate your work and map long-term plans. Discuss your ideas with your advisor.

- Be honest about what you know—don’t bluff—but show willingness to learn new theories and techniques.

- Try to outline a program for the next three years. You should have at least one idea that is not a direct extension of your thesis.

- Show that your expertise is relevant to the problems you mention.
4. Bibliography

Be sure to properly cite the work of others. Readers will certainly appreciate if they are appropriately cited among your references, and some may be very cranky if they are not cited when they should be.