Pure Math and Academia

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Topics

Introduction

- Grad School vs. Undergraduate
- Branches of Pure Math
- Working in Academia
About Me

Introduction

▶ UH Undergrad and Master’s. PhD at IU

▶ 4 years in between Undergrad and Grad school.
  • (I was an older grad student)

▶ Currently a Postdoc at (the) Ohio State
Grad School Experience

Undergraduate
- Many different subjects
- Transition to focus on math
- Some TA and Tutoring jobs
- Feeling smart

Graduate
- Many different math subjects
- Transition from courses to research
- Teaching and grading
- Feeling slightly less smart (and that’s ok!)
Teaching
Grad School Experience

- Can be stressful
- Easy to get pigeonholed (into specific courses, or as a teacher in general)
- Takes a lot of time
- Can be very rewarding
- Some teaching experience is necessary for most academic paths
Branches of Pure Math

- You can find your own niche
- It’s good to branch out, but it’s also good to focus on what you find interesting
- Graph is not actually planar
Branches of Pure Math

- Graph is not actually simply connected
- All these representations are biased
- Try to find a subject at the intersection of all your interests

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Challenges

Working in Academia

- Lots of competition (not as much choice)
- Low(er) wages (than in industry)
- Never not working
- Long time in school
- Multiple postdocs? \(\Rightarrow\) Moving often
- 2-body problem?
Benefits

Working in Academia

- Flexible work schedule
- Travel for conferences
- Consistent engagement with your favorite branches of pure math
- Teaching can feel very rewarding
- The joy of discovering new mathematics

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Thanks!