The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on *all* your courses
(Content, pace, style, work outside course meetings...)

Each course's contents were wonderful; I never would have been able to learn any of this by just taking classes at school. It is amazing to know that there are so many different fields of mathematics out there.

The pace of each class was fairly well done. The goals of each class was slightly different, and the pacing reflected that. Each professor was excellent at conveying what they were teaching.

Work outside course meetings was rigorous enough to challenge me quite a bit at times, but not oppressively hard, which I appreciated (since I would like to do other things in D.C. rather than just homework).

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

I was surprised (but maybe not?) that each professor was so young. It was great to have professors who were able to teach us at a high level, but who were also willing to be our friends. The same goes for both of the T.A.s. I have not had a T.A. in any of my classes before, so it was good to have someone more knowledgeable than me to go to for help. I also liked that they were close to my age, so they would have experienced what I am experiencing just a few years ago; I can also get a flavor of what I will soon be experiencing from them.

Each professor and T.A. were consistently available and willing to help and to talk about grad school/math/life. I truly appreciate all the time that everyone has put in to help us along the way.

I am glad that I enjoy being around all the participants; this is a wonderful group of people.

The students/staff who have helped with the program, though often not seen by me, have no doubt been of tremendous aid to making things run smoothly.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

Most of the lectures, while only partially/minimally understandable, were very good and displayed a wide variety of mathematics. It was good to get a brief glimpse into different areas, especially ones that were not being covered in the summer courses.

I liked that we were able to talk more with the guest speakers afterwards when we went out to dinner. In that more casual, and longer, setting, we were able to ask them more questions.

4. **Comments on field trips**
(Information provided, interaction with hosts, general interest...)

The field trips were good, and the information provided obviously appropriate to each location/entity. Each host was nice, and I am grateful that we were able to visit so many different places. While it is sometimes difficult to see exactly how (pure) math relates, it was useful to know and hear that mathematics can be useful in a fair number of fields.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

Panel discussions were very helpful. Once again, I like hearing about personal backgrounds and seeing where everyone came from. The panels were helpful in getting some varying perspectives on a wide variety of topics.

6. Comments on program direction, local arrangements and social activities (Dorm, meals, work space, city, atmosphere...)

The dorm is very nice, overall. I love the large desks—it provides plenty of work space. While I am used to living in the suburbs rather than the big city, it was convenient to have lots and lots of places (restaurants, museums, etc.) within walking/metro distance. I don't think I completely like being around this many people on the streets, but overall, it was a good experience. There was plenty of time left for us to engage in social activities and explore the city.

7. Comments on student presentations (Preparation, relevance, effort,...)

It was a good experience to have these presentations. Although I don't feel any better at presenting, it was good to have a major activity where we would have to work with each other intentionally and then present to others what we learned. Each presentation was a good supplement to the contents of the course. Most participants put in a significant amount of effort in order to prepare for the presentations.

8. What can we do to make the program more effective?

Tuesdays and Thursdays tend to be fairly long when we have guest lecturers/speakers and then dinner soon after. If possible, perhaps it would be beneficial to have shorter class periods on these days? I'm not sure how that would work since there would probably still be awkward gaps in between, but maybe that would lessen the exhaustion on these days.

But for the most part, the program seems to have a fairly good schedule.

9. What did you want to gain from this program? Extent to which this was addressed.

I was interested in gaining knowledge regarding graduate school. I knew that I wanted to pursue higher education in mathematics, but was extremely unsure as to how I was to go about doing so. Coming to this program has exposed me to several perspectives regarding graduate school. I loved hearing everyone's individual stories.

Although I am still nervous and somewhat stressed about the application/admission process (and about the impending difficult of grad school), I am confident that I will eventually succeed and that everything will work out.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I saw the SPWM poster outside the math tutorial center/room. I would not have noticed it if I weren't bored/waiting for my friends. Even though our department does put up posters for opportunities/programs, they are not very well advertised.

It would help if professors or the department would be willing to send out at least an email to the students about the program. While GW/SPWM is visible, it is difficult to find if students aren't looking for it. I suppose that professors should be encouraged to share with their students about programs like these?

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I did not consider other summer programs outside of my school. I did do summer research at my own institution before coming to SPWM. Fortunately, the timing worked out and I was able to participate in both. If I did have to choose between the two, I would have likely chosen SPWM in order to experience something outside of my own school.

The small setting seemed rather appealing, and the opportunity to learn more about math and graduate school did as well. While the program description was fairly detailed online, I was not entire sure what to expect since I had never before heard of this type of program.

Did you take advantage of all the academic opportunities we provided at GW?

Unfortunately, I did not. The only time I used the library was to scan the drawings for the SPWM t-shirts.

Any other comments (please be candid and use extra sheets as necessary)

Thank you, thank you, thank you for inviting me to this program. I've met so many people here and shared so many experiences. I got my first taste of the east coast. Thanks again! I appreciate everything you've done for us. :)

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Semigroups: I really enjoyed this course. The topic was interesting and I didn't feel at all behind not having had abstract algebra. There was a good mix of lecture and class work.

THC: I loved this course. It was nice being introduced to something completely different than the course my school offers. I wish it had gone a little faster (I hate to say it, but I wanted more homework problems to work on).

Solitons: I didn't enjoy the topic, but I greatly prefer pure math over applied. I think it was nice to have a course for students who prefer the applied side of math. Lectures were packed full of information (I would have liked more in class problems to work through), and at times went too fast for me.

Normed Division Algebras: Good pace, interesting topic. I liked that we had a lot of in class activities, but several of the assignments were boring and repetitive (just running through a lot of computation to see something we already knew to be true). I wish some of the problems had been more challenging instead of just long but easy.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Jackie was completely fantastic. She answered all of my questions and was always giving advice. She is very smart and always approachable. She was one of the most helpful parts of the program.

Jen was also wonderful, but Jackie's personality is similar to mine, so I think it was easier for me to go to her for help. Still, Jen answered my questions and talked about personal experience (not just giving straight fact answers). She was fun and social, easy to talk to. Very helpful with soliton homework.

Sara Quinn was very sweet and always seemed willing to help out whenever I had a question. I felt comfortable asking things about class that weren't directly related.

Berit sat with me on the ride from NSA and answered all of my questions about grad school, life as a professor, and her personal experience. She was very helpful.

Sarah was very smart and knew her topic well. Sometimes she came across as rude or condescending. She was willing to talk and answer questions.

Alyssa was friendly and very nice to organize activities, but I didn't feel very comfortable approaching her with questions.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

It would have been nice to see some student research. A lot of what was said I didn't understand. I know that's how conferences go, but it would have been helpful to see what other students were doing (maybe something with grad students talking about the research they do in school).

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

I enjoyed the panel session at Northrop Grumman very much, but sitting through so many speakers in a row was tough.

I enjoyed the census bureau the most.

It was always nice when people would talk about their personal experience/story.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

I loved having the panel discussions with the math professors and graduate schools. I wish we had had the opportunity to also talk with high school math teachers when the professors came. Another thing that I think would have been helpful would be to have had a panel of current grad students.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

The dorms were great. The city was easy to get around. The money for food was more than enough

7. Comments on student presentations

(Preparation, relevance, effort,...)

Sometimes I wish the presentations had been more math heavy. I really enjoyed preparing and presenting my project for THC and Semigroups, but sometimes during the process for all four I felt bad about just looking stuff up and then retelling it to the class. I felt like I should be working on math classes instead of just doing internet research.

8. What can we do to make the program more effective?

I don't know. I got from the program what I wanted to.

9. What did you want to gain from this program? Extent to which this was addressed.

I wanted to learn more about grad school, how to apply, what to look for, what they look for, etc. It has been very helpful (almost information overload). I feel like I know what to expect and what is expected of me. I also feel like I have a network of people to contact if I have questions or need advice.

10. How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

AMS website. I knew about the program early, so I never thought visibility was a problem.

11. How many other summer programs did you consider? What was the principal reason for you to choose our program?

I applied to five. I wanted something that started in the middle of the summer. SPWM was my top choice because I wanted to go somewhere to learn more about grad school.

12. Did you take advantage of all the academic opportunities we provided at GW?
I don't know what this means. I went to the library often and used the books there.

13. Any other comments (please be candid and use extra sheets as necessary)

I've enjoyed the program. It was less social than I expected, but it gave me time to get some extra work done. I'm very glad that I applied and was accepted. It's been extremely informative and helpful. I feel better prepared to begin the application process. Having TA's and professors who were willing to talk about personal experience and offer questions made the program. I'll be sure to recommend the program to others.

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)
   - Course I – Sara Quinn, Theory of Computation
     - Interesting content, good pace, manageable workload
     - Nice to do something that was so different from anything else I've done before
     - Good balance of definitions, theorems, etc. with examples and exercises
   - Course II – Alissa Crans, Normed Division Algebras
     - Good pace and workload
     - HW had a nice mix of straightforward problems with challenging problems
     - Interesting content
     - Good mix of familiar material with new material
     - The "directed exploration" worksheets were an enjoyable and effective way to learn new material and were balanced nicely with a good amount of lecture
   - Course III – Berit Givens, Semigroups
     - Good content
     - Seemed to move a little slowly at first, but picked up to a nice pace after a few days
     - Most HW was doable but still challenging (which was good); a few HW problems seemed too advanced for what we were doing or had done
   - Course IV – Sarah Raynor, Solitons
     - Interesting concepts
     - Nice exposure to several aspects of that branch of math
     - Material was difficult to fully understand
     - Course moved too quickly to understand the details – I just settled on trying to understand the big picture
     - Felt like we were trying to cover too much material for the scope and time frame of the course

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)
   - Sara Quinn
     - Very knowledgeable, helpful, personable, friendly
     - Excellent teacher
     - Fun to be around and talk to
   - Alissa Crans
     - Very knowledgeable and helpful
     - Excellent teacher
     - Often interacted socially with us and the ta's, which was really nice and a lot of fun
   - Berit Givens
     - Excellent teacher, very knowledgeable
     - Approachable, easy to talk to both about math and about other things
   - Sarah Raynor
     - Very knowledgeable, was available to help
     - Comments sometimes came across as condescending
     - I had a bit of a personality clash with her
   - Jen & Jackie
     - Both were incredibly nice and friendly
     - Always made time if we needed it and were extremely helpful with questions about math, grad school, or anything else
   - Students

- Everyone was great. This is definitely an amazing group of intelligent and wonderful people.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)
- A lot of interesting topics, usually presented in a way that was understandable

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)
- A nice break during the week
- Provided really good information about career options in the DC area
- I especially enjoyed the trip to NSA
  - People were extremely helpful in answering questions

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)
- Good to have panel discussions on the field trips – provided lots of different perspectives and insights into job options
- Careers/Academic panel wasn't as informative as most of the others
  - Panelists talked a lot about their personal issues instead of what was relevant to us

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)
- Meals, atmosphere, and social activities were wonderful
- Lots of fun to explore DC
- Dorm
  - Nice to have kitchen in the room and laundry in the building
  - Not clean
  - Had bugs in our room
  - Didn't receive laundry service the last week

7. Comments on student presentations
(Preparation, relevance, effort,...)
- Presentations were good
- Well-prepared and well-delivered

8. What can we do to make the program more effective?
The program was great! I know it's not much help, but I don't have any suggestions.

9. What did you want to gain from this program? Extent to which this was addressed.
I wanted to gain exposure to more areas of math. I also wanted more information about going to grad school and about working as a mathematician. All of these were addressed in this program.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I saw a poster for it on a bulletin board in a stairwell of my school's math building. To increase recruitment and visibility, I would suggest sending a virtual ad/announcement to math departments to send to their students. I received information on REUs via email from my department, but I came across this program by chance.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I only considered a few programs because I was late in applying. Luckily, SPWM's application deadline is a little later. I chose this program because, from the description on the website, the program seemed like it would provide the information and exposure that I was looking for. I wanted a summer program, but I was more interested in exposure and information on grad school and future opportunities than I was in a research project.

Did you take advantage of all the academic opportunities we provided at GW?

I used the math lounge a little, and I used the Fitness Facilities.

Any other comments (please be candid and use extra sheets as necessary)

SPWM was an incredible experience and a wonderful learning opportunity. I now have a much better idea of what I want to do after graduation because of the advice and opinions of the people I've come in contact with here.

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

In general, it would have been nice to have two pure math courses and two applied. I enjoyed learning about topics that I would not have had the opportunity to study in undergrad.

i) Normed Division Algebras
   a. We covered a solid amount of material in the two weeks. I felt that the material was at an appropriate level for our class and we went at a good pace. We had a fair amount of homework.

ii) Theory of Computation
   a. This went at a really good pace. We could have covered more material in the last week. The content was interesting and Sarah's style of teaching was great. We had less outside work assigned in this class than the others, but no one was complaining. It was a good balance.

iii) Semigroups
   a. Again, we had a good balance of homework and classwork. The material was interesting and an appropriate amount for a two week course. We went at a nice pace.

iv) Solitons
   a. This class was more fast paced, perhaps too fast at times. It was different from the others in that the material was more complicated. I found that I enjoyed physics from taking this class. I liked that we had homework to think about, but that we weren't pressured to turn it in the next day completely correct.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Faculty:

i) Alissa Crans
   a. Alissa was such an effective instructor. Her enthusiasm for math made the material more exciting to learn. She was very organized and her lectures were easy to follow. She was always available to answer questions and talk about grad school.

ii) Sarah Quinn
   a. I can't give enough positive feedback about Sarah. She was such a good instructor. She really cared about the students' progress and was always available to help. She was always checking to make sure we were okay with the class.

iii) Berit Givens
   a. Berit was a great instructor. She was very helpful and enjoyed talking with the students. She conveyed the material effectively.

iv) Sarah Raynor
   a. Sarah obviously had a very strong command of the material. She put a lot of time into preparing for class, with a syllabus and a website and videos on maple, to name a few things. I enjoyed her wit and sense of humor but it could come across as a little much to people sometimes. Also, the class moved pretty fast and covered complicated material. But she emphasized almost every day that the stuff WAS hard and that we were just supposed to get the gist of it.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

I LOVED the guest lectures. They were a great way to meet other women mathematicians. Also, the material was exciting to learn. I don't think I ever found a lecture uninteresting. I liked how the guest talks were more about applied math, because the courses (except solitons) were on pure math. The guest talks on grad school, and the GRE, and math careers were extremely helpful as well.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

i) Northrop Grumman
   a. The panel was really helpful. Having the 3 lectures in a row was a little rough. But I enjoyed the trip and was so thankful for the opportunity to find out more about how they use math.

ii) NSA
   a. The cryptology museum was interesting, but I wish we had more time to explore on our own, rather than listen to that tour guide. I loved the presentation they gave. Everyone was really friendly.

iii) Dibner Library
   a. Looking at Euler's and Bernoulli's handwritten letters was amazing.

iv) U.S. Census Bureau
   a. This was my favorite field trip. It was the most exciting of the four. The building itself was cool, but most of all I loved how enthusiastic the panelists were. They seemed to really love their jobs. I was pleasantly surprised with this trip, because I had some preconceived notion that the Census Bureau would be boring.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

The panel discussions were a great opportunity to hear about grad school and ask questions. The panels provided really valuable information about what to expect from grad school. I'm glad we had a lot of panels, because many people had different and sometimes contradictory information on things like the importance of the GRE and other factors of grad school.

6. Comments on program direction, local arrangements and social activities.
. (Dorm, meals, work space, city, atmosphere...)

Everything was amazing! Murli was a great program director; he always checked in during class to make sure everything was going okay and was just generally helpful whenever we had concerns or questions. Going out to dinners with the other program participants, professors, and guest lectures was a phenomenal opportunity to have casual conversation with other mathematicians and ask questions and just bond and make connections. As far as dorms go, it would have been nice to have a shower curtain earlier on. And it would have been nice to have a fitted sheet rather than two flats. But those are just minor details. Overall, the atmosphere was wonderful.

7. Comments on student presentations
(Preparation, relevance, effort,...)

The presentations were a good chance to improve public-speaking skills. Also, working with classmates who weren't my roommates allowed me to interact with a wider range of people.

8. What can we do to make the program more effective?

Perhaps making the program 6 weeks long and having four 3-week classes. I honestly thought the program was extremely effective.

9. What did you want to gain from this program? Extent to which this was addressed.

10. How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I heard about the program both from a professor at my school who had heard about it from someone else, and I saw it online, on a math organization's website.

11. How many other summer programs did you consider?

I considered about 7-8 other programs; they were all REUs. I turned down several offers because I really wanted to do this program.

12. What was the principal reason for you to choose our program?

From reading about it online, it seemed like this program gave a glimpse into grad school. I preferred the notion of taking a few shorter classes and getting tastes of different areas of advanced mathematics, rather than spending 8 weeks focusing solely on one research project as in an REU. The program seemed really well-rounded: guest lectures, panels, field trips, etc.

13. Did you take advantage of all the academic opportunities we provided at GW?

Yes. I feel like I did. I went to office hours and talked to the TAs. I also asked questions at all the panels and field trips. It was so nice to have access to the library, too.

14. Any other comments (please be candid and use extra sheets as necessary)

I cannot express how invaluable this program was for me. It gave me a glimpse into grad school. I didn't even know that there was a math GRE subject test before this program. I learned about the rigor of math grad school and know that it will be a big commitment but that the work will pay off someday. Hearing the perspectives of several different mathematicians helped me piece together some sense of what a future career in math can be.

Being able to work alongside other women in a similar position as myself was immeasurably helpful. I learned from my peers and worked with them and just made friendships that I was not expecting to form in such a short amount of time. Being able to make connections with mathematicians at universities and industries was awesome as well. I feel more reassured going into my senior year now that I know there are many job opportunities for women math majors.

So, thank you. I can already tell that this program has had a profound impact on my life, and I haven't even left D.C. yet. Thank you for everything!

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Normed Division Algebra:

The content of this course was very helpful with a review of what I had learned in abstract algebra but presented in such a way that my knowledge was increased as well as reinforced. I liked the teaching style because of all the different examples Alissa brought to the class. I believe the homework assigned outside of class strengthened the material but was not overbearing so that we wouldn't be able to figure it out.

Computation:

I have never had any computation classes so this was a really nice view into another different kind of math I wouldn't have the experience to view that unless I did something like that in graduate school. Sarah presented material in a way we could all follow and understand. The homework was enjoyable to do and helped me remember what we did in class.

Semigroups:

This course was a nice follow of the other algebra course. It was another subject I wouldn't have gotten to see until later on in my education. I never knew there was so much to do with a semigroup or what a semigroup was until that class. I really enjoyed Berit's teaching style of how she always had the class do some group activity that allowed us to use right away what we had just learned. Her homework was just like her activities thus it was nice to continue what we were learning.

Solitons:

This course was a bit much for me. I think it was way to fast pace for me to really get much out of it. It may just be because I have not had much of partial differential equations. For me this course could have taught us a lot had we taken it slower. Since I was not catching on to the course material during class, the homework was practically impossible for me to complete. I really enjoyed where the course was leading and it is super interesting learning about more applied mathematics. Sarah also did a good job at bringing all the different kinds of math into her course.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

I believe all the teachers you brought into the program were excellent teachers. They all had their own variety of teaching techniques, which made each class unique. For the most part the teachers were available and if the times did not work, they worked with us to make time to help. The teaching assistants were excellent. They were with us through the end and reassuring us when things got hard. They were definitely available when ever we needed them.

The other students were awesome to get to know and we were able to make some really close friends. Everyone was willing to help each other when in need.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

It was nice that most of the lecture speakers were more applied since the courses were more pure. I liked having the opportunity to listen to different talks even though I did not understand a lot of what they were telling us.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

It was nice to hear people talk about their personal job experiences and how they got there. It was neat being able to interact with them at their work sites. I also enjoyed getting out of the same place each week to show some variety. I believe we got plenty of information at each of the field trips and many more contact people. Having the field trips provide a panel is also very helpful.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

For the most part I enjoyed the panels. The academia and industry panel was a bit rough, and somewhat made me question going into the academia and graduate school in general. I really enjoyed getting to talk to a person about admissions and then the graduate school panel was very helpful. It was nice to see the different schools talk about their programs as well as talk up the other programs.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

It was very nice having a refrigerator in our rooms. It helped with balancing the eating out with fresh food from the store. Overall the dorm was not too bad except that the linen change was pretty unsatisfactory. I also did not enjoy the other cleanliness of the dorm in general. (Though that has nothing to do with SPWM) I was a bit shocked when I realized the campus was right in the middle of busy streets, a total first for me. I definitely prefer a more closed in campus. It was nice how close everything was to the National Mall as well as a metro.

7. Comments on student presentations
(Preparation, relevance, effort,...)

I think having presentations was beneficial to everyone. It helped me meet more people outside of my room. They also provided us with a chance to get more information about topics that interested us. I do believe they were relevant because it got us looking further than the scope of course. It was really hard to get two projects in on time. It was kind of like finals week for the program.

8. What can we do to make the program more effective?

To make the program more effective, I would say to make sure the girls interact more. Like maybe more planned outings by the TAs or something to that affect because I feel we start getting confined to the people in our room. That is why I really liked group projects because it got us out with the other girls.

9. What did you want to gain from this program? Extent to which this was addressed.

I was hoping to gain an insight in to what I would like to do and what is out there for mathematicians. I also wanted to get more information about graduate schools. I really do believe this program opened my eyes on how many different opportunities there can be for a mathematician. As for me personally I did not figure out what I am going to want to do but it did help me figure out a few things I rather not do which is just as good. I really believe this helped me with graduate school information as well as what it may be like in school.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I hear about the program from the poster you sent to my school and a professor giving me the little slip of paper with the website. To improve recruitment, maybe something more so on the Internet because I do not remember seeing it while I was searching for REUs. (which is why I probably didn't see it.)

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I probably applied to 10 different programs, which were mostly REUs. This program was the top of my choices to do for the summer because I wanted to get more classes in math that my school did not apply. I also had already done a research program the summer before and I wanted more information for graduate school. It also was a bonus that it was a girls program.

Did you take advantage of all the academic opportunities we provided at GW?

I did not use the library at all or really the math lab except for the day Sarah brought us to use the computers. We did use the copier and printer once but that would be about it.

Any other comments (please be candid and use extra sheets as necessary)

I just wanted to personally thank Murli for all the effort you put into this program. I really enjoyed just getting to know everyone and how friendly everyone was to us. Thank you for taking us out to dinner so often and broadening my food experience. ☺ I really had a good overall experience.

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Course I → good content and pace, work outside of meeting time was helpful
Course II → content was good, and the course was sometimes a bit fast. The amount of work outside of meeting time was sometimes too much.
Course III → very much enjoyed the course content and the pace was also very good. The work outside of meeting time was also very helpful
Course IV → I don't like applied math much, so I didn't like the content very much. Pace of the course was very fast, which made the homework quite difficult.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Availability seemed very good and most were also willing to be very flexible timewise. The TAs and faculty were also always willing to meet in order to answer any sort of questions anyone may have.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

The opportunity to interact with speakers during dinner was often very helpful. I often did not understand many of the talks, but the exposure to different areas of mathematics is very appreciated.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

Seeing the facilities more (if possible) would be helpful, but I've found the panels at the field trips to be very helpful.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

Panel discussions have been extremely helpful.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

The dorm management could be better, but otherwise I have felt very comfortable living in D.C. these past 5 weeks.

7. Comments on student presentations
(Preparation, relevance, effort,...)

Student presentations were good.

8. What can we do to make the program more effective?

I feel the program has been extremely effective as is!

9. What did you want to gain from this program? Extent to which this was addressed.

- more mathematical knowledge
- exposure to more concepts
- information about careers
- information about grad school

All of these were addressed very well!

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I heard about it through a professor who knew former participants.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I considered 3 others. I decided on this one because of the location and all the good things I had heard about it. I also appreciated that it was a women's program.

Did you take advantage of all the academic opportunities we provided at GW?

I didn't use the fasciliti̇es much.

Any other comments (please be candid and use extra sheets as necessary)

I enjoyed the program very much!

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Computing content was a lot of fun, really enjoyed it. Pace was very manageable. I loved this class.

Normed Division content was interesting, and pace good.

Semigroups I liked how we did a lot of group work in class. However, at this point I would have liked to see something other than algebra (because we had already seen normed division)

Solitons I really enjoyed this class and benefited from taking it. The pace was fast, meaning we learned a lot. I thought it was very well done.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Everyone has been extremely friendly and helpful. Personally, I especially benefited from having Sara Quinn and Jackie. Sarah R. packs a lot of information in, and I think I learned the most content from her. Sara Quinn was extremely approachable, and I learned a lot about what it's like to go to grad school and be a mathematician from her. Jackie and Jen were really helpful – I loved getting to know people who are in grad school now. Alissa was great too, and did the most social stuff w/ us, so it was nice to have her toward the beginning. Oh, and Kate & Murli were wonderful.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

Svetlana Rudenko had a very interesting topic, it was slightly over my head though.

I thought that there was a nice mix of topics covered by the speakers through the 5 weeks.

They were always approachable and helpful.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

Loved the NSA. Made me want to work there.

The woman who showed us around the Census Bureau was really helpful, I enjoyed hearing her story.

~~Jane Hawkins had a lot of valuable insight.~~

Northrop Grumman had us sit through a few too many lectures in a row.

The field trips were good, and one of the reasons I wanted to come to this program.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

Jane Hawkins had great insights for us.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

Great location! The atmosphere was so helpful and collaborative. I'm so glad I was able to get to know everyone - it ended up being a lot more fun than I had hoped!

7. Comments on student presentations
(Preparation, relevance, effort,...)

I learned a lot from preparing my own presentations, and thought the range of topics to choose from good.

It was also nice to see a flavor of other topics in the presentations by others.

Very relevant, and the experience of presenting valuable.

8. What can we do to make the program more effective?

I don't know. It seems to be well refined at this point, and I would not change anything.

9. What did you want to gain from this program? Extent to which this was addressed.

I wanted to learn about options for after undergrad. This was thoroughly addressed

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

From a professor. Then I read your website, which convinced me to apply. I would highlight that SPWM becomes a community even after the 5-weeks are up, since that was something I did not realize before coming, but that is a really cool benefit of choosing this program over others.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

this and REUs were my choices. I chose this program because it seemed like I would be exposed to a greater variety of math and possibilities than at an REU. Also, the location was a plus! And the opportunity to go on the field trips.

Did you take advantage of all the academic opportunities we provided at GW?

Yes! And learned a lot in the process.

Any other comments (please be candid and use extra sheets as necessary)

Thank you so much! What an awesome experience! I learned about math and opportunities and had a ton of fun getting to know the other girls here!

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Course II: fun content, good pace, Alissa's style of teaching was good, & she didn't expect too much outside work.

Course I: really fun, nice pace, Sara was a really fun teacher, & was realistic about our homework requirements.

Course III: new material, fun, good pace, worked with us, had us work as small groups. fun.

Course IV: did not understand anything, she went too fast, was condescending, but helpful on the projects.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Everyone was very approachable, helpful on projects & homework, and very nice altogether. They all knew their material, & tried to impart that knowledge to us.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

They were really cool. They gave us a taste of a lot of different types of math, & introduced us to a lot of new topics. They were all very open & approachable, & welcomed questions

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

Very fun, informative, wide range of fields, people who met with us were very approachable, informative, & peaked my interest in the different organizations / departments.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

Very fun, informative, a little repetetive, but still very helpful.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

Good deem, amazing meals (!), the city is nice, good atmosphere to go to school & learn..

7. Comments on student presentations
(Preparation, relevance, effort,...)

Fun, challenging, open to interpretation (!).

8. What can we do to make the program more effective?

I can't think of a single thing! (!)

9. What did you want to gain from this program? Extent to which this was addressed.

A better understanding of what grad school would be like to figure out if I wanted to go or not. (Have) ignore this (!).

I have at least figured out that I don't want to teach...

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I have a friend who did the program in 2010, Elizabeth Llamas. She told me about it and it sounded interesting & fun.

My school didn't even know about this, so maybe make it more available for tiny, out of the way, schools

How many other summer programs did you consider? What was the principal reason for you to choose our program?

None. I found out about it, & decided to apply b/c I knew it couldn't hurt

Did you take advantage of all the academic opportunities we provided at GW?

Yes, ~~all but the~~ even the math computer rooms,

Any other comments (please be candid and use extra sheets as necessary)

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

- Computation Sara Quinn - Sara's teaching style was very easy to follow and it was fun to listen to her lectures. She went at a nice pace and she was careful to not give us too much homework around presentation times.
- Division Algebras Alissa Crans - Alissa's classes were part lecture, part group worksheets. It forced participation and helped show how some of the concepts developed. Her homework was a little heavy around presentations but for the most part it was fine. Having presentation rethroughs was a little stressful but helpful.
- Semigroups Brett Givens - Brett was engaging and had a good pace. I enjoyed his class and thought her assignments had just the right amount of complexity.
- Solitons Sarah Raynor - Sarah taught the class with the purpose of giving us a general insight into the topic without requiring us to necessarily understand everything. If we were required to know a firm grasp on all the concepts it would have been way too hard but the way she taught it it was okay.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

All of the staff and students were really friendly and easy to get along with. I felt that all of the teachers were very willing to help us as much as possible and they all gave me a lot of insight into what to do in the future. Jen and Jackie were both very nice. They made sure to be available whenever we needed them and gave us very good feedback for presentations. It was also nice to hear their thoughts on grad school.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

I enjoyed almost all of the guest speakers. They were engaging and tried to speak to as many people as possible at the dinners. It was nice to hear topics that were different from the classes we were taking. The biggest problem was the academic careers panel. They focused way too much on the end and they were not as friendly during the dinner.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

I enjoyed on the field trips. I wish we could have had a few more time at the NSA to talk about their actual jobs and I did enjoy all the variety in what we did with the museum panel and mini lecture. The worst was Montrose Cemetery because it was so long sitting in one space with very little interaction.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

I really liked getting to hear what sort of things grad schools look for on an application. It was also nice to get to hear the different perspectives from small grad schools and large grad schools.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

The meals were amazing. It was so much fun to be able to all be together and get a chance to talk to the guests. I love how we had a wide variety of food. Being so close to all of DC and being able to explore on weekends was great. The dorms had issues with management (bad linen services, not done cleaning when we got here, etc.)

7. Comments on student presentations
(Preparation, relevance, effort,...)

The presentations are of course stressful but I actually liked them. I like teaching things to other people, I liked learning about all the topics I was in, and I liked getting to work with the other students. Having two on the final day was very stressful but unavoidable.

8. What can we do to make the program more effective?

I loved the program. I honestly don't know what I would change

9. What did you want to gain from this program? Extent to which this was addressed.

I wanted to explore what I want to do in the future. This program helped me even more than I expected and I am glad I had this opportunity to see all of my options so clearly. It is hard as an undergraduate to see what you can do with a math degree. This program did a great job addressing that issue.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I first heard about it because my school had a poster for a different Summer program and somewhere on there it they had a link to Stem. I also saw it when I was researching P.E.D.s. I thought the program sounded amazing, I don't know how to make it more visible but the schedule online says that we work from 9am-9pm. That didn't deter me but it was a little scary so you may want to adjust that.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I considered an actuarial internship and a couple P.E.D.s but I really wanted to be a part of this program. I loved how program was designed to explore different things to do with math. I also loved how this program takes advantage of its location to go to some major math employers

Did you take advantage of all the academic opportunities we provided at GW?

I didn't really use GW's facilities.

Any other comments (please be candid and use extra sheets as necessary)

I just want to thank everyone who was a part of this program. I loved this experience and would definitely do it again if I could (maybe as a TA ☺)

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Computation - started off slowly but really became interesting as it picked up.
- the project was a lot of work but it taught me really interesting things.

Normed Divison Algebras - a lot of work but not really much substance. It would have been fun to also discuss some of the project topics in class. Basically, enjoyable but needed more depth.

Semigroups - interesting topic but it covered a bit too much that I've already seen. But semigroups are cool. Perfect amount of work.

Solitons - Not what I would have expected to be my favorite class but it was. The tie-ins to other types of math were fascinating and it made me excited about grad school.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Everyone was extremely helpful and friendly.
The teaching assistants in particular were great help and very approachable. :)

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

Leaned a bit heavily on the applied side but there were some interesting points in every presentation.

It was especially nice to get to talk with them outside of class about life in mathematics.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

Both the NSA and Northrop Grumman were incredibly vague and un-informational.

The Census was decent and the environment was great.

It would be nice to have toured non-completely government/high clearance places.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

The NSF & the Grad School panel were helpful and informative.

The career/academia panel was terrifying, unhelpful, and unnecessarily dramatic.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

The dorm staff was not very helpful and the dorm was less than ideal.
But the location was incredible and it was a joy to be able to explore Washington DC after class.

7. Comments on student presentations
(Preparation, relevance, effort,...)

All the presentations were enjoyable and relevant.
There was sufficient time to do them and it was interesting to do more guided study rather than lecture/class.

8. What can we do to make the program more effective?

My only suggestion would be a bit more variety with the field trips

9. What did you want to gain from this program? Extent to which this was addressed.

I came in looking for a better idea of how to approach grad school and if it is for me. I am more confident in both my wish to pursue it and my ~~ability~~ ability to be accepted somewhere.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I heard about by searching for math summer programs and wound up at an AMA (possibly) list.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I consider four three programs.
This one was without a doubt the best one, that gave me the chance to consider options aside from grad school.

Did you take advantage of all the academic opportunities we provided at GW?

The library was quite nice

Any other comments (please be candid and use extra sheets as necessary)

The program as a whole was incredible and is [redacted] an experience I will treasure

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

I loved our four courses. I was a little disappointed at first to hear we had two algebra classes but ended up really liking both. Theory of computation really appealed to me because of it's applications in computer science. Solitons was great- it was so nice to have an applied course and it was a nice way to wrap up. The pace was perfect and the amount of homework was reasonable. I thought we had too much homework for Solitons, especially during the last week, but Sarah made it very clear that it was optional.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

I absolutely loved the faculty here. Murli, you have the perfect personality for a program director and y always added a certain lightness to each activity. Sara~~h~~ Quinn was the definition of approachab Berit was always so positive and interesting to talk to. S she always had good anecdotes. Alissa was serious (in a good way) and really conveyed passion for her subject. S also conveyed a sincere interest in our mathematica futures. Sarah Raynor was intimidating but incredi knowledgeable & always lightened the mood w/ jokes. Can't say enough good things about Jen & Jackie. They we able to answer any and all questions I had, math-related otherwise. They both have amazing backgrounds and I love hearing from people who are going through it all right no

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

I have mixed feelings about the guest lectures. Some of them were completely over my head, like Svetlana's. On the other hand, it was encouraging to see women in the field & the research they do. It was also so nice to get to go to dinner w/ the speakers. ~~[illegible]~~ It was nice to interact w/ them there, especially with Svetlana! Her background is amazing. I loved the talk from Dr. Fernandez because I am really interested in Statistics.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

The field trips were probably my favorite part (aside from the dinners!) NSA and Northrup Grumann were amazing, and I really want to apply to both (for full-time jobs or for summer internships during grad school). I also realized how important a post-grad degree is, because those that enter jobs there w/o one seem to end up doing one eventually. I enjoyed hearing about Stats for a change at the Census Bureau although I found the place itself to be a little underwhelming. It just felt as though many of the jobs we heard about were light on the math, and more about questionnaire design. Dibner Library was fun, and it was so cool that we got to see notes from Euler & Bernoulli! Finally - Wednesday is the perfect day ☺ We need that break from class!

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

The panels were a nice ~~[illegible]~~ contrast to the guest speaker. I know a few people were upset about the picture painted by the all-female panel ~~[illegible]~~ that Katie set up (w/ the women from Marymount, UMBC, Axiom, and GW). Others found it to be discouraging, but I appreciated their honesty. People deserve to hear how tough grad school is before they go through the application process! It was also nice to hear about admissions. Honestly, ~~[illegible]~~ I didn't know anything about grad school before coming, so this was all valuable information for me!

6. Comments on program direction, local arrangements and social activities (Dorm, meals, work space, city, atmosphere...)

we were treated like kings here! The meals out were splendid I love ethnic food so I really enjoyed the restaurants. Especially Aroma! I found the meal stipends to be generous, but I was eating at home on the weekends so I may not be a good judge of that. The dorms were nice & spacious. I had one problem with our plumbing & the dorm faculty tended to it immediately. I love DC! I also appreciated faculty members arranging outings (Alissa was particularly

7. Comments on student presentations (Preparation, relevance, effort,...)

good about that.)

I developed a lot of confidence and public speaking skills through these presentations. I noticed such a difference from the first one, during which I was full of nerves, and my fourth, during which I was confident & happy to share cool math with my peers. It was also nice to work in different groups - by the end I had worked with almost everyone. It was also good to get in the habit of collaborating, which will be key in grad school.

8. What can we do to make the program more effective?

I was surprised that almost everyone was from a small school. I was definitely expecting people from ~~small~~ big state schools w/ well-known math programs. I was not by any means disappointed, just surprised not to see more variety. I would have liked to learn/hear more about stats, although I seem to be a minority in that regard.

9. What did you want to gain from this program? Extent to which this was addressed.

I just wanted ~~to~~ some help narrowing down my mathematical interests and ~~get a~~ figure out whether grad school is for me. I majored in math because I love it, but I definitely thought it was possible I'd end up w/ a job in some completely unrelated field. After ~~to~~ meeting people who apply math in their jobs on a daily basis, I'm sure that I want to do that too. Also, I am leaving incredibly knowledgeable about the grad school process, and with a game plan for next year

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I spent lots of time googling around for internships for math majors, and easily found SPWM, actually last year. I bookmarked it to remember it for this summer. So for me, it couldn't have been easier to find!

How many other summer programs did you consider? What was the principal reason for you to choose our program?

Since I only returned to the country ~~often~~ at the end of June, this is the only program I considered. Every other program started too early in the summer. Regardless, I would have picked this program - it sounded by the far the most interesting! Especially the field trips sounded great on the SPWM site.

Did you take advantage of all the academic opportunities we provided at GW?

NO, I used the library only for photocopies & printing.

Any other comments (please be candid and use extra sheets as necessary)

Murli, what an amazing program you've created! I am eternally grateful to you for this opportunity. I am sure that it has shaped my future ~~in~~ in a wonderful way. It was amazing to form all these relationships and connections, and I can't wait to see everyone again in Cali!

THANK YOU!

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

Normed division Algebras: fitted topic and also gave a good amount of hw. The info she presented on the last day was the most interesting part though - there should have been more of that covered.

Automata: Started out slow & could have had more HW. however, Sarah Quinn is awesome... I like how the course was laidback and the subject material was diverse. also, our project topics were well chosen.

Semigroups: could have been slightly more "expansive" rather than "introductory". However, I like how we got problems to do in class, and we also had interesting yet fair, level of hw problems.

Solitons: Very fast paced, but super interesting. Slightly too much hw, could have been more relaxed pace, but actually I kind of liked how much info we covered, and the use of computers in class. Would have been better to have this class more towards the start of the program.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Both of our TAs were awesome! They were very willing to help us practice our projects, and talk to us about math outside of classes. For example, both TAs talked w/ me about algebraic topology, & I appreciated this.

Murli is amazing.

Our teachers were all super smart & I enjoyed learning from them, particularly when they spent time talking 1 on 1 w/ us, and also when they discussed their own personal areas of research.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

I enjoyed them when they talked about research.
In particular, Anne Fernandez was really nice.
The ones on grad. school got repetitive.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

A lot of times, they just took us in a room and talked to us... would be more engaging to get to walk around and see the location, get to interact w/ a variety of people and have them actually show us where they work / take us through a normal day.
However, I enjoyed the panels of people, and having lunch there with them.
The cryptology museum, and Deibner library were my favorites.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

TOO MUCH GRAD SCHOOL!!! I would far rather ~~more~~ hear a talk on math then talk grad school to death.
However, a few panel discussions on this were helpful.

6. Comments on program direction, local arrangements and social activities (Dorm, meals, work space, city, atmosphere...)

Our dorms and classrooms were fine.
I loved our dinners! That was definitely one of the highlights of the program.

7. Comments on student presentations (Preparation, relevance, effort,...)

I liked it; these helped me bond and obsess about a specific topic. Also, preparing for them was a catalyst. which helped us bond w/ the teachers.

8. What can we do to make the program more effective?

Make sure topology is offered!!!
Also, have more exciting feild trips, and less grad. school talks → more research/subject talks.
I liked hearing about our teacher's research, so might be fun to have THEM do one of the speaker days.
I also am glad we got a book from Semigroups → could do this for other classes.

9. What did you want to gain from this program? Extent to which this was addressed.

I am more comfortable with giving presentations, our projects gave us good practice.
Also, I feel like I know so many more people in a more extensive math community.
It was good to keep practicing math, over the summer, and the program gave more breadth of the feilds of math than a normal course would.
Also, I do actually feel more knowledgable about what I have to do to prepare for grad school.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I found it online (from googling summer programs for women).

I honestly think having past participants from SPWM recruit the students from their schools would be a great way to advertise. I know I am going to tell some of my younger friends about this program.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I considered 2 other summer programs, one of which I applied for but was not accepted into.
however, I chose SPWM over doing summer research at my school

Did you take advantage of all the academic opportunities we provided at GW?

Probably not, considering we were so busy!
But I did try to take advantage of talking w/ all the people here who knew math. :)

Any other comments (please be candid and use extra sheets as necessary)

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

I had never (for the most part) heared of any of the things we learned about except for groups, rings etc but even those seemed to be forgotten. All the courses were interesting. Because of time, we can only brush through them but it's definitely exciting to be aware that these topics exists & we can continue studying up them on our own or at home schools.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

Sara Quinn - Best professor EVER
Bert was amazing too.

All the girls were respectful, smart & helpful which I didn't really expect. I thought it would be a much more competitive atmosphere but now it's like a sisterhood. & ofcourse Murli was phenomenal. Sweetest, most helpful person.

I'm very greatful in general for the professors & TA's b/c there were so many times that I needed their help & they were always available even @ 10:30P

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

Interesting. I learned how to be a student at a lecture. I always worried that I didn't understand everything but apparently most people in there are in the same position too. I've learned to take notes on things I want to further investigate & trying to identify the larger concept.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

LOVED THEM! This portion definitely amazed me the most. I had absolutely no idea that mathematicians worked in industry & sort. I thought they could be professors or go into an applied field. I definitely learned the most from the trips & it was great to hear individuals experiences about how they are where they are today.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

IT'S A LOT! But it's good to hear it ~~ever~~ ever. I think it makes the idea of going to grad school or continuing w/ math more real & seem as an obtainable goal.

6. Comments on program direction, local arrangements and social activities (Dorm, meals, work space, city, atmosphere...)

The location is perfect. I love the easy access to government agencies / industry & how we are able to visit them. Tourist-wise, it's also a great location.

7. Comments on student presentations (Preparation, relevance, effort,...)

They were not what I expected, in a good way. They're not designed like a typical school presentation but we are able to choose topics that we hardly know anything about & learn as a group what they are. It's great b/c we are to get insight on even more topics in math & take leadership over our own learning.

8. What can we do to make the program more effective?

I have no suggestions. I wouldn't remove anything. I wouldn't add either b/c our sched is already hectic.

9. What did you want to gain from this program? Extent to which this was addressed.

I don't think I had any expectations but I got more out of it than I could ever expect to get out of a SUK program. The bonds I've made, the math I've learned, the skills obtained - everything was great. & to in addition gain advice & a look into our possible futures as mathematicians really made everything way more special

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

I searched for summer programs & found this program. I really wish every woman mathematician could do this program but if I hadn't found it, I wouldn't have heard of it. Maybe sending flyers to different math programs like that they can pass it down. Also the students can serve to share info. back at their home school

How many other summer programs did you consider? What was the principal reason for you to choose our program?

I only considered this program. Last yr I was supposed to do the Carleton Program but did an REU instead and I wish I would've done something more like this. I knew I wanted something with more guidance regarding the future & encouragement/ hope that a career in math is possible

Did you take advantage of all the academic opportunities we provided at GW?

I think I did. I spent a lot of time @ the library & in the math department office using textbooks & just trying to expand what I knew. Also, just talking to the faculty & students.

Any other comments (please be candid and use extra sheets as necessary)

The George Washington University
Department of Mathematics
Summer Program for Women in Mathematics (SPWM 2012)
End of Program Comments from Participants- August 3, 2012
(Please return to Murli on Friday. Thanks.)

1. Comments on **all** your courses
(Content, pace, style, work outside course meetings…)

I really enjoyed all of the courses, and how they were based around topics we would not generally see as undergraduates. The only part that became challenging was the last week, having homework outside of class was extremely difficult to schedule in since there were two presentations going on at the same time.

2. Comments on faculty, teaching assistants, students and staff
(Academic level, mathematical and social interaction, availability, helpfulness, effectiveness...)

I found all of the teachers and TAs to be really approachable people, and very helpful. I did have difficulty on a particular assignment and Jackie definitely helped me work through the problem. All of the other students were very enjoyable to be around, and I felt we all tried to help each other out.

3. Comments on guest lectures
(Content, relevance, interaction with speakers ...)

most of the lectures I did not fully follow, but I think it is helpful to be exposed to different areas of mathematics, since one of the reasons I wanted to do this program was to help me decide what area I want to study in grad school.

4. Comments on field trips
(Information provided, interaction with hosts, general interest...)

I thought the Northrop Grumman trip was the least helpful for me, just because most of their speakers talked about extremely technical topics. I did enjoy all of the other trips however, and I am glad to know more options that I have after I graduate.

5. Comments on other activities, panel discussion, etc
(Content, general interest, information provided...)

I personally preferred the panels that addressed what I need to do to become a better candidate to be accepted to a graduate school. I wasn't certain what exactly schools were looking for with the GRE and research but at least now I have some idea of how a few schools feel on those topics.

6. Comments on program direction, local arrangements and social activities
(Dorm, meals, work space, city, atmosphere...)

I thought the dorms were good and the food money was enough for all the days when we didn't eat as a group

7. Comments on student presentations
(Preparation, relevance, effort,...)

I thought the presentations were good practice but I also wish that all the classes assigned the presentation in the first week of the class just so there is more time to prepare. I definitely liked the fact that the instructors offered run throughs

8. What can we do to make the program more effective?

The division algebra course and the semigroup course path were very similar to an algebra class, and it might be interesting to have a wider range of topics.

9. What did you want to gain from this program? Extent to which this was addressed.

I primarily wanted to determine what area I will study in grad school, and although I am not completely sure still, I think I can at least rule out a few topics.

How did you hear about our program? What can we do to improve our recruitment efforts and visibility?

One of my professors let me know about the program, which he read about in a magazine. I think the best way to improve visibility would be if more professors were aware of the program, since most undergrads are less connected.

How many other summer programs did you consider? What was the principal reason for you to choose our program?

This is the only program I applied to, bc I just thought it sounded like a fun experience to have.

Did you take advantage of all the academic opportunities we provided at GW?

I did use the library once to organize my presentation.

Any other comments (please be candid and use extra sheets as necessary)

I had a really awesome time!