## Thank You!

As the fall term is coming to a close, in this final math newsletter of the term, we would like to extend our gratitude to some people who have made some noteworthy contributions to Union's math community this term.

- **THANK YOU, Professors Leila Khatami** and **Jue Wang,** for organizing a wonderful Undergraduate Math Seminar series this fall term!

- **THANK YOU, Professors Ehssan Khanmohammadi** and **Jetjaroen Klangwang,** for coordinating Union's participation in upcoming Putnam Exam and for organizing the many practice sessions to help participants get ready.

- **THANK YOU**, **Calculus Help Center tutors, Tom Harrison, Christos Kakogiannis, Celine Nguyen, Zack Porat, Arun Sitsabeshon,** and **Tina Tully.** You have helped many students this term. The Math Department and its students truly appreciate your efforts.

  **NOTE: The last night of the CHC this term is the last day of classes, Tuesday, November 19.**

## Some Last News from Math Club and AWM, by Kallan Piconi '20

On Tuesday, October 29, Math Club and AWM hosted a dinner and discussion with the female math professors at Union. We would like to thank **Professor Gasparovic, Professor Wang, Professor Khatami, Professor Johnson,** and **Professor Tønnesen-Friedman** for joining us - they offered great insight into math pathways as well as the benefits of majoring in mathematics.

We look forward to seeing you at Math Club and AWM events next term.

## Problem of the Newsletter
## November 18, 2019

**Last week's problem**: Congratulations to **Son Nguyen '23** for submitting a correct solution to the most recent problem. A sample solution has been posted on the bulletin boards around Bailey Hall.

**This week's problem:** As a study break, have fun working on the following: Let *a, b, c, d* be distinct integers such that the equation

$$(x-a)(x-b)(x-c)(x-d)-9=0$$

has an integer root *r*. Show that *4r = a + b + c + d*.

**Professor Friedman** (friedmap@union.edu) will accept solutions through December 31, 2019.

## Study Tips from an
## Old Wall Street Journal Article



**How to Ace That Test**

**1** Review the hardest material right before bedtime. Going to sleep right away consolidates the information in your memory.

$E = MC^2$

**2** Turn off music, text messages, TV and email. Distractions make you less likely to remember material you were studying at the time.

**3 REPEAT** Test yourself repeatedly. Students remember more when they force themselves to retrieve concepts than when they simply re-read the textbook or their notes.

**4** Eat oatmeal for breakfast. Balanced, slow-digesting diet provides a sustained flow of glucose to the brain.

# Fall 2019: Math Final Exam Schedule

| Course # | Course Name | Professor | Room | Day | Date | Time |
|---|---|---|---|---|---|---|
| MTH*054*01 | Number Theory | Rosenthal, K. | BAIL 106 | Thu | Nov 21 | 8:30-10:30 AM |
| MTH*100*01 | Calculus with Precalc 1 | Cervone, D. | KARP 005 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*100*02 | Calculus with Precalc 1 | Cervone, D. | KARP 005 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*100*03 | Calculus with Precalc 1 | Friedman, P. | BAIL 100 | Tue | Nov 26 | 8:30-10:30 AM |
| MTH*110*01 | Calculus 1: Differential Calc | Lesh, K | VART 204 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*110*02 | Calculus 1: Differential Calc | Zwicker, W. | VART 204 | Fri | Nov 22 | 11:30-1:30 PM |
| MTH*110*03 | Calculus 1: Differential Calc | Lesh, K | VART 204 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*110*04 | Calculus 1: Differential Calc | Zwicker, W. | VART 204 | Fri | Nov 22 | 11:30-1:30 PM |
| MTH*110*05 | Calculus 1: Differential Calc | Khanmohammadi, E | BAIL 102 | Fri | Nov 22 | 8:30-10:30 AM |
| MTH*113*01 | Acc Single-Variable Calc | Rosenthal, K. | BAIL 106 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*113*02 | Acc Single-Variable Calc | Gasparovic, E. | OLIN 115 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*113*03 | Acc Single-Variable Calc | Gasparovic, E. | OLIN 115 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*113*04 | Acc Single-Variable Calc | Tønnesen-Friedman, C. | BAIL 207 | Tue | Nov 26 | 11:30-1:30 PM |
| MTH*115*01 | Calculus 3: Diff Vector Calc | Klangwang, J. | BAIL 201 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*115H*01 | Enriched Diff Vector Calc | Hatley, J. | BAIL 104 | Fri | Nov 22 | 8:30-10:30 AM |
| MTH*117*01 | Calculus 4: Integral Vector | Wang, J. | BAIL 100 | Fri | Nov 22 | 8:30-10:30 AM |
| MTH*197*01 | Discrete Math for Comp Sci | Friedman, P. | BAIL 100 | Mon | Nov 25 | 8:30-10:30 AM |
| MTH*199*01 | Intro to Logic & Set Theory | Cervone, D. | BAIL 207 | Fri | Nov 22 | 8:30-10:30 AM |
| MTH*199*02 | Intro to Logic & Set Theory | Khatami, L. | BAIL 100 | Tue | Nov 26 | 11:30-1:30 PM |
| MTH*219*01 | Topics in Discrete Math | Klangwang, J. | BAIL 102 | Thu | Nov 21 | 8:30-10:30 AM |
| MTH*336*01 | Real Variable Theory | Khanmohammadi, E | BAIL 102 | Tue | Nov 26 | 8:30-10:30 AM |

**GOOD LUCK ON YOUR FINALS!**