Rachel Carleton

Department of Mathematics
Texas State University
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EDUCATION

Kent State University, Kent, OH
Ph.D., Pure Mathematics, May 2024
Kent State University, Kent, OH
Masters of Art, Pure Mathematics, Aug 2020
Hollins University, Roanoke, VA
Bachelors of Art, Double major in Mathematics and English, May 2014

EMPLOYMENT EXPERIENCE

Assistant Professor of Instruction, 2025-present
Lecturer, 2024-2025
Department of Mathematics, Texas State University

- Instructed students in a variety of courses including Precalculus, Calculus I and II, Linear Algebra, and Mathematics for Business and Economics II.
- Co-lead the Precalculus Teaching Forum, meeting regularly with other precalculus instructors to share resources and teaching strategies for the course.

Graduate Teaching Assistant, 2017-2024
Department of Mathematics, Kent State University

- Instructed students in a variety of subjects including precalculus, trigonometry, and calculus.
- Mentored four undergraduate researchers and guided their research into the commuting graph and tidy groups.

Teaching Assistant, 2019
John Hopkin's Center for Talented Youth

- Introduced students to a variety of subjects related to cryptography, including modular arithmetic, binary number systems, and permutation groups.

ACT Teacher, SAT Teacher, ASVAB Teacher, Subject Tutor, 2015- 2017
Hunting Learning Center, Oswego, IL and Naperville, IL

- Instructed students in both the verbal and math portions of the ACT, SAT, and ASVAB.
- Provided subject tutoring in algebra, geometry, precalculus, and calculus.

Peer Tutor, 2011- 2014
Hollins University Quantitative Reasoning Center, Roanoke, VA

- Assisted students at various levels with homework, test preparation, and projects.
- Tutored students in the features of Microsoft Excel.

PUBLICATIONS

- **Carleton, R.** and Lewis, M.**,** The Commuting Graph of a Solvable *A*-Group, *Journal of Group Theory*.
- Beike, N., **Carleton, R.,** Costanzo,D., Heath, C., Lewis, M., Lu K., and Pearce, J., *p*-Groups with Cyclic or Generalized Quaternion Hughes Subgroups: Classifying Tidy *p*-Groups. *Bulletin of the Australian Mathematics Society,* Vol 108, Issue 3, Dec 2023. pp 443-448
- Beike, N., **Carleton, R.,** Costanzo,D., Heath, C., Lewis, M., Lu K., and Pearce, J., Finite Solvable Tidy Groups Are Determined by Hall Subgroups with Two Primes, *Bulletin of the Australian Mathematics Society*.
- Beike, N., **Carleton, R.,** Costanzo,D., Heath, C., Lewis, M., Lu K., and Pearce, J., Extending Resulsts of Morgan and Parker About Commuting Graphs, *Bulletin of the Australian Mathematics Society*, Vol 105, Issue 1, Feb 2022, pp 92-100

PRESENTATIONS

- Carleton, R. (2024, June 1). *The commuting graph of a finite solvable A-group*. Zassenhouse Groups and Friends Conference. San Marcos, TX, United States
- Carleton, R. (2024, February 24). *The commuting graph of a finite solvable A-group.* China US Group Theory Conference 2024. Gainesville, FL, United States