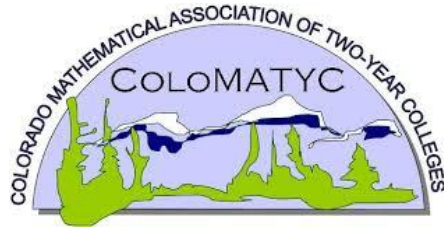# ABSTRACTS

Rotunda, S100, Student Centre
8 – 9 AM, Registration & Breakfast
Thank you to Pearson for their generous sponsorship
of our breakfast

Rotunda, S100, Student Centre
9:10 – 10:20 AM, Keynote Address *Revolutionary Mathematics: Liberating Ideas from History for Today's Teachers and Students*

Dr. Janet Heine Barnett, Department of Mathematics and Physics, Colorado State University - Pueblo

Janet Heine Barnett holds a Ph. D. in set theory from CU Boulder, and has taught mathematics at CSU-Pueblo since 1990. A 1995-1996 fellow at the Mathematical Association of America's Institute for History of Mathematics and Its Use in Teaching (funded by the NSF), her scholarly interests have long included the history of mathematics and its use in promoting both student mathematical understanding and teacher reflection on pedagogical issues. She integrates history into her own teaching practice in a variety of ways, and is nationally and internationally known in particular for her work with primary historical sources in the undergraduate mathematics classroom. As part of that work, she currently serves as one of seven PIs on the national NSF-funded project Transforming Instruction in Undergraduate Mathematics via Primary Historical Sources (TRIUMPHS). Throughout her tenure at CSU-Pueblo, Professor Barnett has also sought to improve the quality of mathematics education in the Pueblo region by recruiting, training and mentoring K-12 teachers of mathematics. In addition to several local and regional awards for excellence in teaching and scholarship, she received the national Haimo Award for Distinguished Undergraduate Teaching from the Mathematical Association of America in 2017. A native of Pueblo, Janet shares her passions for mathematics and history, as well as dance and yoga, with her husband and traveling companion George W. Heine III, whom she met when they were both teaching mathematics as Peace Corps volunteers in the Central African Republic (1982-1984).

As a human activity, mathematics is inevitably shaped by the social, cultural, religious and political contexts in which its practitioners reside. In this talk, we explore this close relationship through examples of interesting mathematical people and ideas connected with two important revolutions that began in the latter half of eighteenth-century, in France and Britain respectively. Along the way, we will consider some specific (and perhaps revolutionary!) teaching strategies for liberating tales such as these from their historical setting, and bringing them into today's mathematics classrooms.

10:20 – 10:30, AMATYC Update

ABSTRACTS
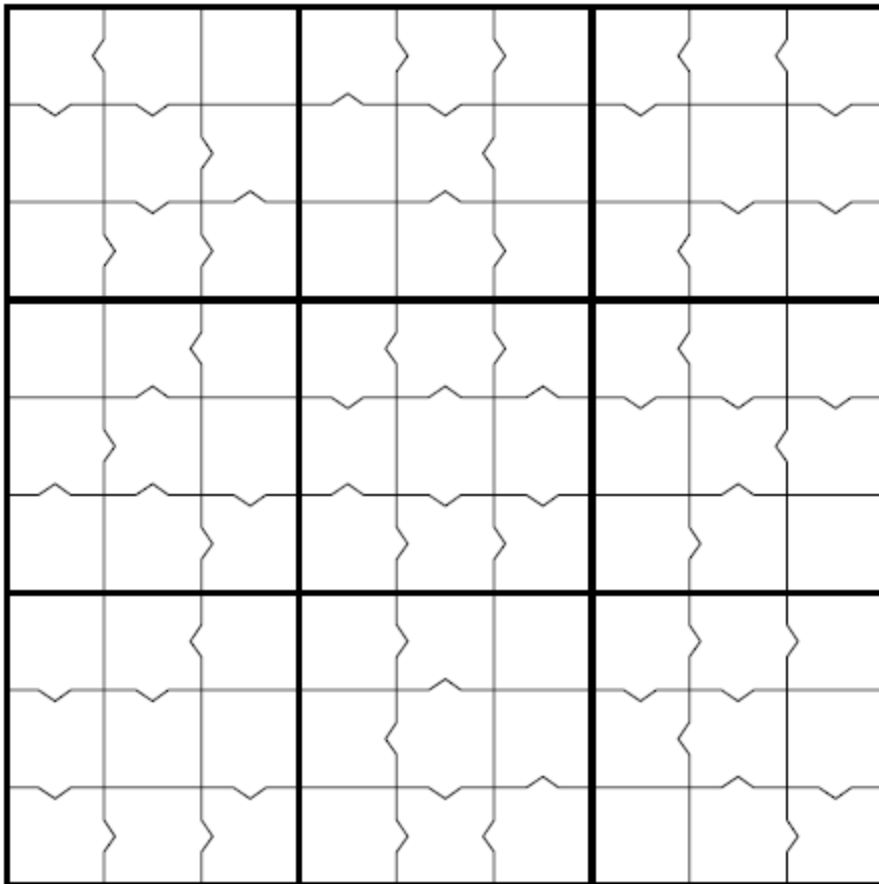
Jigoku #2

Fill in the blank squares so that each row, each column and each 3-by-3 block contain all of the digits 1 thru 9.

> and < connections between squares indicate that one number is greater than or less than another. If you use logic you can solve the puzzle without making guesses.

Need a little help? The hints page shows a logical order to solve the puzzle. Use it to identify the next square you should solve. Or use the answers page if you really get stuck.

ABSTRACTS

10:40 – 11:30 AM, Session 1

Classroom Building, Room 102 *ALEKS in the Pre-Calculus Classroom*
Lindsey Small, McGraw-Hill

In this session you will learn how to incorporate ALEKS into your Pre-Calculus class. You will be shown how to create the class in ALEKS, select a text book, prepare the work for the students, and track the student's progress and grades. Participants will be given an opportunity to work together selecting topics in ALEKS that will align with the Pre-Calculus CCNS competencies.
*while MAT 166 is the course of context, the presentation will apply for other course levels (from Co-Req's through MAT 166).

Classroom Building, Room 104 *Overleaf: LaTeX in the Cloud for Openware, Group Projects, and Homework*
Tracy Lawrence, ACC

Overleaf, a free cloud platform for LaTeX, has completely reshaped by courses. You can use it for the following:
- develop Openware for our course!
- facilitate group projects!
- give better homework feedback in less time!
- better prepare our students for STEM courses and careers!

I will show how easy to use and powerful this free tool is, both for you and for your students.

Classroom Building, Room 106 *Creating a Robust Co-Requisite Lab for College Algebra*
Teresa Adams & Alicia Turner, CCD

Join us to learn how CCD runs their co-requisite lab for College Algebra. Teresa will share some of the preliminary data from the Pathways program. Alicia will share how tactivities and supplemental math assignments are being used during the lab course. We will share our MyMathLab course that is associated with MAT 093 and explore some of the study guides and tactivities that students have successfully used.

**11:35 AM – 12:15 PM, Lunch and Business Meeting
Rotunda, S100, Student Centre**

Thank you to McGraw-Hill for their generous sponsorship of our lunch.

ABSTRACTS

Killer Sudoku #2

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Fill in the blank squares so that each row, each column and each
3-by-3 block contain all of the digits 1 thru 9.

The dotted lines indicate areas which also contain a non-repeating set of digits.
These squares can be added together to produce the sums shown in the clues.

Be sure to use the answers page if you get stuck!

"The best thing about animals is that they don't talk much."
-- Thornton Wilder

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ABSTRACTS

12:15 – 1:05 PM, Session 2

Classroom Building, Room 107 *Try It and SEE – AMATYC's New Open-ended Student Research League*
David Lawton & Holly Ashton, PPCC

This month AMATYC will open a competition designed to engage student problem solving, research, and presentation of a solution through the Student Research League. Come to view sample problems, discuss team preparation strategies, and learn the guidelines for this competition. We will begin our session with a sample research problem for participants to try. We will then share competition requirements and registration process information. Finally, we will brainstorm team preparation strategies to give Colorado students the best support as they work toward monetary prizes and recognition at the national level. Your students could earn top prizes in this inaugural year.

Classroom Building, Room 114 *Accessibility to Affordable Quality Content*
Cengage

High costs can limit student access to learning. This presentation will offer options for combining affordable open educational resources with innovative technology to offer high-quality, low-cost solutions and alternatives. Learn how you can access affordable resources for your students without sacrificing your freedom to customize content.

ABSTRACTS

1:15 – 2:05 PM, Session 3

Classroom Building, Room 102 *Soft Skills for Student Success in a Corequisite Course*
Johanna Debrecht, NVCC

Students need more than just outstanding content presentation to succeed in a corequisite course. These students often lack crucial soft skills necessary for college level work. In this presentation, we'll cover items that were most helpful in corequisite College Algebra, including time management, metacognition, study skills, resourcefulness, grit and communication.

Classroom Building, Room 106 *Pearson's Best MyLab Math Features to Support Different Course Models Such As Co-Reqs*
Jenny Crum, Pearson

Students are arriving each semester at institutions across the country without the essential math skills they need to be successful in college-level courses. As a result, institutions are looking for innovative ways to redesign the learning experience—particularly in developmental, foundational, and gateway courses— to accelerate learning and deliver remediation on skills that are critical not just for success in initial courses, but for academic success as a whole. Pearson has worked with institutions across the U.S. to create a variety of print and technology solutions for the most popular course models. From ready-to-go solutions to custom options tailored to the goals of your institution, we can help you meet every student's needs and increase student success. This session will show some of Pearson's best MyLab Math features such as Integrated Review, Skill Builder, Mindset, Interactive Assignments and Learning Catalytics as well as how these features support different course models such as co-reqs.

ABSTRACTS

2:15 – 3:05 PM, Session 4

Classroom Building, Room 104 *WeBWork and OER*
Brenda Forland, RRCC, James Morski, CCD, & Justin Sherrill, AT Professional, CCCOnline

WeBWork is an open-source online homework platform for math and science. WebWork allows institutions to deploy a high-quality assessment environment that is free to students. Over the last year, RRCC, CCD, and CCCOnline have been creating and implementing OER learning objects in WeBWork, mainly for MAT 121 – College Algebra. This talk will cover our experiences and future plans.

Classroom Building, Room 107 *Math! It's Magic! Too!*
Sharon McPherson, PPCC

So many of the magic tricks see today have solutions based in Mathematics. Although the magician performing the trick may know the secret, they often don't know or understand the math behind it. We will analyze several different magic tricks ranging in mathematical difficulty, to try and understand the "why".

Those attending will also be invited to share ideas regarding which classes the magic and the math would be useful to reinforce a topic, or to generate interest.

Classroom Building, Room 144 *Putting Achievement Within Reach for All Math Students*
Brigeth Rivera, Knewton

Join us to learn how **alta**, Knewton's fully integrated adaptive learning courseware, provides students with a personalized, engaging, and affordable learning experience while giving instructors the ability to build a course that fits their curriculum.

ABSTRACTS

3:05 – 3:30 PM Closing and Social Time
Yummy Snacks Available

Thanks again to all of our generous sponsors!