The Centre for Education in Mathematics and Computing provides professional development opportunities for mathematics teachers. Our programs respond to the need for practical and enrichment information that can be implemented immediately in the classroom.

Problem solving forms the basis of effective mathematics programs. The sessions on curriculum will focus on problem solving. This conference will increase your tools and skills and enhance your teaching of mathematics. Teachers from any province or country will benefit. Teachers should have some previous teaching experience in an elementary or high school.

Whatever your personal, professional or mathematical goals, our conference can give you the edge you want.

Wednesday, August 22 to Thursday August 23, 2018
(Registration Deadline: Monday, June 18, 2018)

Participant cost of $120 includes meals, conference fee materials, and harmonized sales tax (HST)

A limited number of rooms (double occupancy) are available in a nearby hotel with no additional cost

Registration Now Open!
Follow the link [http://www.cemc.uwaterloo.ca/events/mathteachers-winnipeg.html](http://www.cemc.uwaterloo.ca/events/mathteachers-winnipeg.html) to register
Grades 9 to 12 Program

Dates: Starting Wednesday, August 22 at 8:00 a.m., ending Thursday, August 23 at 3:30 p.m.

Location: St. John’s Ravenscourt School, Winnipeg, MB

Program: The conference will help to supplement your teaching of mathematics on problem solving and provide some new resources and teaching strategies.

<table>
<thead>
<tr>
<th>Wednesday, Aug. 22</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8:00 am – 9:00 am</td>
<td>Early Registration, coffee &amp; networking</td>
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<tr>
<td>9:00 am – 10:30 am</td>
<td><strong>Plenary Session:</strong> Let’s Solve Some Problems! <em>Ian VanderBurgh</em></td>
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<tr>
<td>10:30 am – 10:45 am</td>
<td>Break</td>
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<tr>
<td>10:45 am – 12:15 pm</td>
<td><strong>Session 1:</strong> TBA, <em>Mike Szestapolow</em></td>
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<tr>
<td>12:15 pm – 1:00 pm</td>
<td>Lunch</td>
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<tr>
<td>1:00 pm – 2:30 pm</td>
<td><strong>Session 2:</strong> Visualizing Mathematical Solutions. <em>Ian Donnelly</em></td>
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<td>2:30 pm – 2:45 pm</td>
<td>Break</td>
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<tr>
<td>2:45 pm – 3:30 pm</td>
<td><strong>Plenary Session:</strong> There Are Still Frontiers in Math – and Many of Them Are Accessible for Kids. <em>Clay Kellough</em></td>
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<th>Thursday, Aug. 23</th>
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<tr>
<td>8:00 am – 9:00 am</td>
<td>Registration, coffee, networking</td>
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<tr>
<td>9:00 am – 10:30 am</td>
<td><strong>Plenary Session:</strong> Games for Mathematicians. <em>Sherri Burroughs</em></td>
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<td>Break</td>
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<td><strong>Session 3:</strong> Primes and Number Theory. <em>Carole Biljik</em></td>
</tr>
<tr>
<td>1:00 pm – 2:30 pm</td>
<td><strong>Session 4:</strong> Non-Permanent Vertical Spaces for Collaboration. <em>Lam Nguyen</em></td>
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Register, view program online, by visiting [http://www.cemc.uwaterloo.ca/events/mathteachers-winnipeg.html](http://www.cemc.uwaterloo.ca/events/mathteachers-winnipeg.html)

Registration Fee: $120 per registrant
## Synopses of Sessions for Math Teachers’ Conference – Grades 9 to 12 Teachers

### Plenary:
**Let’s Solve Some Problems!**  
*Ian VanderBurgh*

It is a rare time to be able to sit down for 90 minutes to just solve some problems. It is also important to get the chance to stretch our brains by working on some problems that are harder, but still accessible. In this session, we will work through a handful of problems, aiming to talk through approaches to some harder, but still accessible, problems that could be interesting for use as enrichment and discussion in the classroom. We will also talk about the hard task of teaching problem solving.

### Session 1:
**Title TBA**  
*Mike Szestapalow*

Description TBA

### Session 2:
**Visualizing Mathematical Solutions**  
*Ian Donnelly*

Description TBA

### Plenary:
**There Are Still Frontiers in Math – and Many of Them Are Accessible for Kids**  
*Clay Kellough*

In this session we will explore topics that lead to problem solving inquiry, and hopefully fun, as we explore the math world’s recent developments, its tantalizing mysteries, and its open-to-anyone puzzles. When I think about student engagement, I sometimes wonder what math is doing wrong, that the sciences are doing right. As any science teacher will tell you, students often learn about science’s new discoveries, its controversies, its big open questions, from media around them outside of the classroom. They are hooked before they even hit the door, with their own questions and curiosities about black holes, dark matter, global warming, etc. What can we do to build that sense of awe, wonder, and drive to learn when it comes to math? Some of the activities I will lead the group through will be aimed at elementary school-aged learners, others will tend towards the high school set.
**Plenary:**
Games for Mathematicians  
*Sherri Burroughs*

Description TBA

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**Session 3:**
Primes and Number Theory  
*Carole Bilyk*

Come explore some of the interesting mathematics associated with prime numbers. What interesting discoveries happened in 2013 regarding prime numbers? How can we use this to bring mathematics alive for our students?

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**Session 4:**
Non-Permanent Vertical Spaces for Collaboration  
*Lam Nguyen*

Description TBA

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**Plenary:**
A Hike Through the History of Mathematics  
*Wayne Loutet*

From the megalithic builders through the ancient Greek, Egyptian, Persian, Indian and Chinese mathematicians into western European and American mathematics from the last 6000 years, we will hit all the highlights. With two of my favourite studies, history and mathematics, combined, I will leave with many questions for you to take with you. We’ll go from megalithic yards to computers and fractals, with many stops in between.