Hello to all Grade 4, 5 and 6 students in Canada! Welcome to the wonderful Math Performance Festival Contest. We sent this poster to you and to every single elementary school in Canada from St. John's, Newfoundland to Victoria, British Columbia to Grise Fjord in Nunavut. We want all of you, wherever you live, whatever languages you speak, to enter the coolest contest in Canada.

Professor George Gadanidis and his colleagues came up with this project to give you a chance to show the rest of Canada (and the world!) how exciting Math can be when you use your wonderful, creative minds to create Math performances. They have had a lot fun seeing Math through songs, poems, dance, drama and art. They want you to do that too. So, get thinking about Math, then drum, dance, rhyme, or sing your ideas to us.

I know you will send all sorts of very special Math performances and I can't wait to see what you and your imagination can do.

Good luck in the contest and don't forget to have fun!

Julia O'Sullivan

Dean and Professor
The Faculty of Education
The University of Western Ontario

On behalf of the Fields Institute, it is a pleasure to invite you to participate in the Math Performance Festival.

This Festival is a unique, interdisciplinary celebration of mathematics through the lens of performance. Both educators and professional mathematicians know that mathematics is a hands-on discipline that is best learned through active effort. The "Performance Festival" will harness the creative energy of elementary school students, and will encourage them to focus their natural desire to play with modern technology on an exploration of "how can you say mathematics with that".

I share with you the excitement of looking at mathematics in this way. Both mathematics and the performing arts are exemplifications of human curiosity and desire to understand our world. To look at mathematics through performance is to see a creative, passionate and aesthetic side of mathematics.

I look forward to the Festival and to seeing the mathematical performances that will be produced by students and teachers from across Canada.

Yours sincerely,

Barbara Lee Keyfitz
Director, Fields Institute

## How to Participate in the Math Performance Festival

The Math Performance Festival is a Canada-wide forum for sharing and celebrating the mathematical performances of grades 4-6 students and teachers.

Please submit performances through our Festival Portal, at www.MathFest.ca, in one of three ways (See www.MathFest.ca for more details):

· Using a **webcam**, record live performances directly into our Portal.
· Submit video or picture files.
· Publish performances to your **school website**, and submit the url.

All submissions are screened by the Festival Committee before they are publicly available through the Festival Portal.

The Math Performance Festival is a project led by George Gadanidis (UWO), Susan Gerofsky (UBC) and Rick Jardine (UWO).

## IDEAS FOR TEACHERS
(see www.MathFest.ca for more ideas and sample performances!)

### How to Write and Perform a Math Poem

**Write a math poem**

· **Pick a math topic** (like probability, division, measurement, fractions, or algebra).

· **Make a list of words** and ideas that relate to your topic.

· **Write metaphors and similes** about your topic using your list of words or ideas. Metaphors and similes link two things that are not usually connected but do share some common elements.

· **Explain your metaphors and similes** (see the poem on the right).

· **Write a poem** using your metaphors and similes and their explanations.

**Perform your Poem**

· Illustrate the poem with your own artwork.

· Create a dramatic reading of your poem.

· Use Story Telling software, like Photo Story, Movie Maker, iMovie or iPhoto, to create a multimedia performance of your poem.

· Create a song based on the poem.

### How to Interview a Math Concept

*A Real Square*

*Our tireless math reporter has visited Flatland to interview the square.*

*Does it bother you that everyone thinks you're a square?*
Not at all. A square is what I am.

*If that's the case, then why have you been telling everyone that you're a rectangle?*
Because I am a rectangle.

*How can that be? You just told me you're a square.*
A rectangle is a quadrilateral with four right angles. I'm a quadrilateral with four right angles.

*Hmm. I see what you mean.*
Most people think I'm a square, which is true, of course. But I'm also much more than that.

*Can you explain?*
You see, I belong to many different sets of shapes. The biggest set I belong to is the set of polygons. A polygon is a closed shape with straight sides. I also belong to the set of convex polygons and to the set of regular polygons.

*You're a convex polygon because all your angles are less than 180. And you're a regular polygon because you have equal sides and equal angles.*
Now you're catching on.

*And you're a parallelogram, which is a quadrilateral with opposite sides parallel.*
That's true.

*And you're a rhombus, which is a parallelogram with all sides equal.*
I am all these things. But my friends call me square.

*Thank you, square, for telling us about yourself.*
My pleasure.

**Prepare for the Interview**

· **Pick a math concept** (like the number π, the fraction ¼, the Venn diagram, the triangle, or the hexagon)

· **Make a knowledge web for your topic.**
  · Use a large, blank sheet of paper
  · Write your concept in the centre
  · All around your concept, write all the things you know and can find out about it (use your textbook; use Google; ask your peers)
  · Then write as many other things that your concept connects to (for example, the hexagon is found in beehives and in floor tiles; where else?)

· **Make a list of interview questions** and possible answers, using the ideas from your knowledge web. Good interviews offer some controversy and surprise. For example, here's a possible Q&A for the hexagon:
  Hexagon, is it true that you are a honey thief?
  Of course not. Where did you get such a crazy idea?
  Tell us the truth, Hexagon. Why have you been spending so much time in beehives?

**Write your Interview**

· **Sequence your questions** in an order that tells a good story.

· **Refine your Q&A.**
  · Be concise in your questions and answers.
  · Use expressive language.
  · Show humour and emotion.

· **Test your interview with a friend.**
  · Act it out.
  · Reverse roles and try it again.
  · What works well? What needs improvement?

**Perform your Interview**

· Create a dramatic reading of your interview.
· Record a radio show performance.
· Write your interview as a comic strip, with appropriate pictures/expressions for different parts of the interview.
· Use Story Telling software, like Photo Story, Movie Maker, iMovie or iPhoto, to create a multimedia performance of your interview.

*Graphs*

*Graphs are flowers, always growing
Different shapes, various types
Graphs are a bird soaring,
ascending and descending
Graphs are a friendship,
having up and down points
Graphs are human life,
starting low, ending high*

*Graphs are like a radio,
both can bring bad news
Graphs are like a telephone,
both communicate
Graphs are like a stop watch,
can record time
Graphs are like a camera,
both show actions*

*Graphs are like a library,
both help you learn
Graphs are as well done as a famous painting
Graphs are as interesting as a mystery
Graphs are as accurate as a road map
Graphs are as simple as addition*

*Graphs are as educational as researching
Graphs are extraordinary!*

*Jenn Weeks*