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Math in Seventeen Syllables

A Folder of Mathematical Haiku

In our July 2017 issue, we issued an open call for mathematical haiku, which we defined to be a three-line poem in the "5-7-5" syllabic form that expressed a mathematical idea or experience, and hopefully connected it to the human condition.[1] In deference to traditional Japanese haiku, we encouraged poets to consider using allusions to nature or the seasons in their work, and / or what is known as a caesura or kire represented by punctuations, space, line-break, or other grammatical break that is intended to compare two images implicitly.

At the time we wrote:

> hopefully poems
> will arrive like a river—
> math made tangible

And indeed they did! We received haiku on an amazing variety of themes and subjects, from many different authors.

This poetry folder contains an eclectic selection of mathematical haiku, representing the diversity of mathematical ideas and experiences. We are able to publish only a fraction of the poems we received; we were surprised and (slightly but very much delightedly) overwhelmed by the interest our call sparked. We expect that there will be other similarly inspired poetry folders in the future issues of the *Journal of Humanistic Mathematics*; stay tuned!

We decided to print the contributions of each individual on a different page to let each author's individual style shine through, with the exception being a few pages which contain poems created by multiple authors. The authors are presented alphabetically by last name.

We hope you will enjoy this poetry folder of mathematical haiku.

EDITORS OF THE *Journal of Humanistic Mathematics*

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[1] See Huber, M. and Karaali, G. "Math in Seventeen Syllables: An Open Call for Mathematical Haiku," *Journal of Humanistic Mathematics*, Volume 7 Issue 2 (July 2017), pages 435–436 (available at: http://scholarship.claremont.edu/jhm/vol7/iss2/31).

Dor Abrahamson
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Base Eight in the Spring

I wrote a poem with
Seventeen syllables
Did I count right?

Francesca Arici
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Index theory

a Dirac operator
recovers the manifold's topology
via its fredholm index

Monstrous Moonshine

unexpected connections.
symmetries and monstrous representations
are one under the moonshine

Heisenberg's relations

position and momentum
possess a non trivial commutator.
uncertainty relations

Anna Bardone-Cone
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Meteor shower,
Vectors flying through the sky,
Soft axis landing.

Oak tree, solid trunk —
Base times height, the mass stretched out,
Vibrant life inside.

Fool-proof but messy,
The quadratic formula,
Pick zeroes like fruit.

Debra Borkovitz
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Why Fractions are Hard

Two variables —
not one. A relationship —
hence difficulty.

Ryan Brown
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To Teach, To Learn, Mathematics

Students enduring—
Brightening, discovering.
I see the joy, too.

Jason Callahan
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Axiom of Choice,
Well-Ordering Principle,
and... what's Zorn's Lemma?

Christina Carroll
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Without any doubt
every mighty redwood tree
was once just my height.

There's not enough room
in seventeen syllables
to contain infin—

Branching forever
my favorite tree grows down,
lone root to the sun.

Samuel N. Cohen
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The Dynamic Programming principle

Searching forwards for
control is peering through fog —
do it in reverse

Radu V. Craiu
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The Universe is
Chaos distilled to challenge
Till patterns emerge.

Primeval silence
Broken, then pieced together
By a new language.

Kevin Farey
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Surface seeming flat,
at moon's eclipse its shadow
argues otherwise.

Cosecant, you say,
by the dawn's earliest light,
is one over sine.

Suppose humankind
knew neither of pi's value
nor of winter's end.

Benjamin Gaines
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Fractals

Fractal Images
Reduced and Replicated
Forever the Same

The River

Flowing Downriver
Water Traces Gradients
Calculus Revealed

Fibonnacci

All Throughout Nature
The Fibonacci Sequence
Spiraling Outward

Whitney George and William Yenter
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X, Y, and now Z
Now I know my A, B, C's
JK it's 3D

Paul Glendinning
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On the pond surface
reflected dragonflies clash.
Mirror symmetry.

Algebra's nightmare:
a new finite simple group.
Black ink on fresh snow.

Wind-swirled mist rises.
A glimpse of distant mountains.
A theorem is born.

Laura Kline
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Topsy turvy tricks
Like negative exponents —
Duck heads under lakes

Sudden rain shower,
The debris rushing downhill,
Tangential rivers

Peaceful living and
Nicely balanced equations
How we long for both

Larry Lesser
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3/14/15

In America,
Pi Day of the Century
was transcendental!

17

Wallpaper patterns;
9-by-9 Sudoku clues;
what teenage Gauss made.

Transformed

Think of earthquake strength,
Musical notes and loudness,
And brightness of stars.

Rachel Levy
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Past

Viscous fluid film
Tiny layer changing depth
Shoved by surfactant

Present

Scholarship. Teaching.
Tugs on time and brain and heart.
Delicious when one.

Future

Math continuum
Modeling in work and life
From cradle to grave

Hannah Lewis
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But, Why?

x equals y, but—
why? dig deeper and all your
answers will unearth.

Systematic

formulas help to
create a world of magic
called mathematics.

Oceanic Arithmetic

math is water for
some. allows us to explore
depths not seen before.

Dan McQuillan
dmcquill@norwich.edu

Topological Graph Theory applied to Molecular Biology

Count the edge crossings.
They must stay on the surface.
Blocked by a membrane.

The Median versus the Mean on the Putnam Mathematical Competition

Most scores are zero.
A few get almost perfect.
Average score?—Ok.

The Value of an Education

Exponential growth
Starting from almost nothing
We can save the world.

Eric Newman
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More things than places
The pigeonhole principle
One must share its spot

Halfway there each step
You'll get to the goal someday
But you will die first

She'd divorce for him
A stable marriage exists
He prefers his wife

Lora Newman
lora237@yahoo.com

No vacancy at
Hilbert's hotel—There are rooms
Left for all of us!

It is shorter to
Walk straight there—The Triangle
Inequality

A bird cannot dive
Into the sea without first
Touching its surface.

Mason A. Porter
mason@math.ucla.edu

Mixed Dynamics

Am I chaotic?
Or perhaps periodic?
I am divided.

Complexity

A complex system
But does it mean anything?
It's complicated.

Valentina Ranaldi-Adams
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filling one bushel—
forty pounds of ripe apples
for us to carry

square the radius
and then multiply by pi—
full moon in autumn

angles and straight lines—
the Bermuda Triangle's
mysteries abound

Blaine Schmidt
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Nature creates math
In each snowflake, river, tree...
Fractalization

Nature's tapestry
Warp, weft, plus form, and function...
Woven within math

A squared plus B squared
Results in C squared each time...
Pythagorean

Jennifer Schmidt
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Are snowflakes alike?
Probability theory
Says they are unique

Patterns in nature:
Ratio, symmetry, fractal—
Where is the chaos?

Victoria Schmidt
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numbers swimming in
add, subtract, solve the problem
math grasps the answer

as my pencil fades—
the answer is on my sheet
clearer with my math

fragments and pieces—
searching through forests of math
finished my homework!

Manya Sundstrom
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A line meets a curve
Asymptotic, she thought first—
No, osculating.

The idea reveals
herself like a lover does
naked in the light.

I started to count
But I found you were beyond
The continuum.

Alexander van Duin

Exponentially,
The numbers grow or decay,
Falling or rising.

Benjamin van Duin

Pi

Infinite digits
Pi is never repeating—
And inedible

Greg Warrington
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Forty-two students
compare i.i.d. birthdays.
Surprise! No two share.

The Fruit Ninja eyes
bread and ham arcing above —
Lunch, bifurcated.

Fibonacci's law
feeds sequential offspring from
two horny rabbits.

Maggie Weber
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math passes through minds
prism-like, casting color,
splitting rationed rays

translate, rotate, scale;
shapes dance in shifting grids as
axes pirouette

thoughts tense and tremble
her breath catches, theorems
strain under pressure

Jay Yellen
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No? Then adding one
to the product of all primes
gets you a new one!