Death, Trial and Life

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In Mathematics, the value of attempt is often underestimated by students. In almost all cases, struggling to find the solution is as significant as finding the solution itself. Indeed, in many cases, the student's solution turns out to be better than the solution given either by the instructor or the textbook. The following anecdote is meant to illustrate this point.

During Fall 1965 semester, a graduate student at Western Reserve University (now Case Western Reserve University), was taking a course in real analysis. The mid-term exam - indeed the first in the course - consisted of four problems carrying twenty-five points each, and the last problem, presumably difficult, had a hint provided. But deciphering the hint seemed to be as difficult as the problem itself. Being unable to give even an attempt for the problem, "death" seemed to be certain for the student for this course. Missing one problem completely out of four? Besides, a student cannot be sure to have got all other problems completely right.

With trials, made independent of the hint, the student got an idea for another approach for the solution. But having spent time on trying along the lines of the hint, the remaining time allowed the student to provide only a sketch - an overview to be exact - of the solution that he had in mind,

However, the instructor, Dr. Lazer, accepted the sketch as a complete solution. Later, Dr. Lazer filled up the details and handed out the (mimeographed) solution with the note "Idea due to XYZ" in the next class. It got life in the student and brought home the importance of one's own effort. To a beginning international student, it WAS a 'pat on the back.'

Incidentally Dr. Lazer, being both a great teacher and a successful research mathematician, was a counterexample to the usual notion "teaching or research." He seemed to believe in "teaching AND research."

TESSELLATIONS

Tesselations are quite neat
They always stick together like gum on your feet
They have no gaps or spaces
They're always on the floor
(Whether tile or wood, maybe you can think of more)
When you get a chance
You can tap dance and clap galore

They're always flat-planed surfaces
As anyone can see
Finding tessellations is as easy as one-two-three

Now that you know this information you can go across the nation in search of tessellations!

Zan Jabara

MR. TRAPEZOID'S WALK

He walked on a diagonal
Straight through the park
As he looked up through the sky
A rainbow seemed to be making an arc
It ended at the public square
Where a circle of children were playing there
At a popcorn stand people were standing in line
Above them was a huge rectangular sign
The trees on Octagon Avenue cast a shadow most profound
It looked just like a triangle as it reflected on the ground

Michael Pillar

AM 98
UC Berkeley August 3-7

After a successful six year run, AM 98 — the premiere national Art & Mathematics Conference — is coming to UC Berkeley this August. This is the premiere national forum for bringing together mathematicians, artists, and educators to discuss topics of mutual interest — for example, visualization, symmetry, proportion, tessellation, polyhedra. The first three conference days are devoted to invited presentations; the final two days to intensive teacher workshops. As you can see from the program, (much additional information available on our web site: http://http.cs.berkeley.edu/~sequin/AM98/program.html) conference presenters include some of our most prominent artists and mathematicians.

Poincaré remarked that "a scientist worthy of the name, above all a mathematician, experiences in his work the same impressions as an artist; his pleasure is as great and of the same nature." AM98 is dedicated to helping artists, mathematicians, and educators understand and enjoy the source of that pleasure. We hope to see you there, and we hope that you will pass this information on to other interested colleagues. Thank you.

Tentative Program for ART-MATH Conference '98

Monday, Aug. 3, 1998
Nat Friedman, Howard Levine, Carlo Séquin : Welcoming Remarks.
Linda Dalrymple Henderson : Signs of The Fourth Dimension In Modern Art.
Bruce Beasley : Polyhedral Sculpture With Complex Intersections.
Ken Herrick : Fractal and Kinetic Artworks.
Harriet Brisson : Structures of Infinite Extension.
Mike Field : Designer Chaos.
David Hoffman : Minimal Surfaces.
Ad hoc presentations by participants.

Tuesday, Aug. 4, 1998
Charles 0. Perry : Implications of Mathematical Sculpture.
Carlo Séquin : Sculpture Design as a Programming Task.
Brent Collins, Steve Reinmuth : From Design to Pattern to Bronze.
Mariorie Senechal : Generalizations of Penrose Tilings.
Bill Thurston : Math Visualization.
Scott Kim : Inversions, Symmetry.
Ad hoc presentations by participants.

Wednesday, Aug. 5, 1998
Helaman Ferguson : Mathematics In Stone and Bronze.
Arthur Silverman : New Tetrahedral Sculpture
Stephanie Strickland : Poems In Conversation With Mathematics and Hypertext.
Gyongy Laky : Geometry of Form and Sculptural Constructions.
John H. Conway: On Knots and Polyhedra.
Ad hoc presentations by participants.

Thursday, Aug. 6, 1998
Kevin Lee : Tesselations.
Mike Field: PRISM - PRograms for the Interactive Study of Maps.
Nat Friedman : Fractal Stone Prints.
Howard Levine : Anamorphosis.
Ad hoc presentations by participants.

Friday, Aug. 7, 1998
George Hart : Polyhedra.
Carlo Séquin : Virtual Sculpting on a Graphics Workstation.
Karl Schaffer, Scott Kim : Geometrical Dance: Polyhedron Transformations.
Helena Verrill : Palmer's Folding Patterns.
Ad hoc presentations by participants.

Registration for AM 98

Name _____

Home Address _____

Home Phone ( ) _____

Business address _____

_____

Business phone ( ) _____

Fax _____ E-mail _____

There will be rooms for participants to view each other's slides, videos, and notebooks as well as tables for displays. Please check 0 if you plan to show:

1) slides 0, 2) videos 0, 3) notebooks 0, 4) displays 0.

Main interests _____

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The registration fee is $50/day for 1-2 days and $40/day for 3-5 days until June 1. After June 1 fees are an additional $10/day. We expect a large turnout, so it is advisable to send your registration early to reserve a space. Space may be filled by June 1. Please make checks out to "Art and Mathematics." Send to Nat Friedman, Dept. of Mathematics, University at Albany-SUNY, Albany, NY 12222.

Any suggestions, ideas, topics for panels, etc. are welcome.

Suggestions _____

_____

_____

Motel (name and dates) _____

The Smarandache Semantic Paradox

Anthony Begay
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Prove that the following sentence is a paradox:
"All is possible, the impossible too!"

Solution

If "all is possible," then the "impossible" doesn't exist, hence there is no impossible.
If "the impossible too," i.e. "the impossible is possible," then not "all is possible." Contradiction again.

The two parts "all is possible" and "the impossible too" are contradictory to each other.

Reference

Le, Charles T. "The Smarandache Class of Paradoxes," Journal of Indian Academy of Mathematics, Indore, India, Vol. 18, No. 1, 1996, pp. 53-55.

GEOMETRIC SHAPES

Shapes and sizes are very cool,
That's the reason I stay in School.
Miss Schaffer teaches us our math,
She's the one who paves our path.

We learn all shapes and sizes too,
There are so many, here's a few:
Polygon, hexagon, octagon, square.
A circle's surface is very fair.

I hope we learn about more shapes,
Maybe they're in my videotapes.
You can even make shapes out of clay,
I made a triangle just the other day.

Geometric shapes can be found everywhere,
They're something that we should share.
And now my poem comes to an end,
I hope that shapes can too be your friend.

Sam Dudley

POEM

Tessellations Tessellations they are so great
they fit together like carts and crates,
They have very many sizes and very many shapes.
With no gaps and have no flaps, you wouldn't know
why they're under the subject Math.

Natalie Kashhefi

"FUN WITH ALGEBRA!"

The world of numbers can be quite fun,
When your fear of them is overcome.

Algebra looks scary at first sight,
Solving equations with all your might.

Here are a few tricks to help you see,
Just how simple Algebra can be!
Add to one side, add to the other,
Subtract from one, and from the other.

Try to get the variable alone,
So that its true value will then be known.

Follow these rules and Algebra will be,
Just as fun for you as it is for me.

Janelle Kulik