



CREATIVE MATHEMATICS WITH POETRY AND HUMOUR

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ABSTRACT

This article deals with creative phenomenon of Mathematics. Each problem could be easily solved if it is presented in a readable, understandable format. Thus by virtue of poetry and humour, the so called "Difficulties" in solving problems in Mathematics would be resolved and become "Pleasure" in solving problems. Before solving any problem in mathematics, the core of the problem should be understood. Thus creative mathematics not only yields very good results in solving mathematical problems but also makes the mind relaxed and joyous.

Keywords: Creativity, English, Mathematics, Poetry, Fibonacci Series, Pythagorean Theorem.

INTRODUCTION

The educational system would be more successful if it is constructed in such a manner by including humour as a unique live process for promoting knowledge and understanding. Informational communication is the basis of logical thinking instead of vivid dialogue that has an informative purpose. Present work represents an intermediate stage of research of influence of teaching mathematics by involving humour. In particular, humour as the affective factor in mathematical reflection is being considered. With the use of this method, the resultant positive emotions can influence how teaching material is perceived, can facilitate creation of joyful atmosphere.

THE VALUE OF HUMAN LIFE

"Mathematics expresses values that reflect the cosmos, including orderliness, balance, harmony, logic, and abstract beauty."
— **Deepak Chopra**

The sense of humour is a valuable asset in life. He, who possesses it, has always a smile on his lips and in his heart, because he finds peeping behind the apparent and the obvious, new visions carrying him to height unknown. Nothing can put him down, for he is something of a poet and a visionary. And he must be something of a mathematician too, for, is it not the task of the mathematician to see behind things and expose the hidden world of relations which prevail there between the most unlikely situation? How can one be a good mathematician unless he is also something of a poet and something of a humourist?

For centuries, mathematicians were confronted by the fact that the squares of positive as well as negative numbers were positive, so that there was no hope of finding a square root for negative numbers. They accepted failure. Not so one humourist – mathematician, Euler. He said, "Let me create a funny little fellow whom I shall call 'i' just

for the impossible task of being the square root of -1, and watch how he behaves when he meets other numbers". And today, this funny little fellow dominates modern mathematics straddling the whole complex plane, leaving just a thin line for his erstwhile colleagues the real numbers, and when they are in trouble, they took to him for guidance!

Another humourist refused to accept Euclid's dictum that only one parallel line can be drawn to a line from a given point, and created, like Viswamitra, new worlds among which Euclid was like a thin stream between two continents. While they were receiving a grudging recognition as possible but non – existent universes, a modern humourist turned the table by declaring that our own physical world was in large parts itself non-Euclidean. Non-Euclidean geometry thus became the rule and Euclidean Geometry the exception.

MATHEMATICS AND POETRY

Poetry is a part of our life which begins from nursery education. We all have come across with the following nursery rhymes to depict the introduction of Numbers in the early childhood stage:-

ONE, TWO, BUCKLE MY SHOE

One, two, Buckle my shoe;
Three, four, Knock at the door;
Five, six, Pick up sticks;
Seven eight, Lay them straight;
Nine, ten, A good, fat hen.

ONE, TWO, THREE

One, two, three, four, five,
Once I caught a fish alive.
Six, seven, eight, nine, ten,
But I let it go again.

ONE LITTLE KITTEN

One little kitten
 Two big cats
 Three baby butterflies
 Four big rats
 Five fat fishes
 Six sad seals
 Seven silly seagulls
 Eight happy eels;
 Nine nervous lizards
 Ten brave bees
 Eleven smelly elephants
 Twelve fat fleas
 Thirteen alligators
 Fourteen whales
 Fifteen donkeys
 With fifteen tails.

- **Carolyn Graham**

Our sense of wonder and awe at the non-fulfilment of a separate pattern of harmony and beauty finds its natural expression in Poetry. Are there not also poetic situations in mathematics where we experience this same feeling of being lifted to a higher and vaster plane of existence and feel like Arjuna after the cosmic vision?

I know of at least three situations which have affected me this way. These are;

- (i) George Cantor's Transfinite Arithmetic which builds a bridge between the finite and the infinite.
- (ii) Euler's One-Line Poem:
 $e^{i\pi} + 1 = 0$ at the junction of the real and the complex, of the rational and the irrational, of the Algebraic and the transcendental of Algebra & Trigonometry and Analysis.
- (iii) Those cosmic points, the circular points at infinity at the frontier between Euclidean and Projective geometries where these two meet and grin at each other.

Was Karl Weirstrass exaggerating when he said, "A mathematician who is not also something of a poet will never be a complete mathematician?"

I am not surprised that the mathematician Sylvester used to break out into poetry in his class lectures.

Mathematics is a serious study, why not enliven it in the class-room with a little humour? You will be rewarded with a vision in front of you which will remind you of tooth-paste advertisements!

- THEY SAY, WHAT THEY SAY, LET THEM SAY

(Motto of Marischal College, Aberdeen)

- Music is a hidden exercise in arithmetic of a mind unconscious of dealing with numbers

- **Leibnitz.**

- Poetry has been called a creation, a making, a fiction and mathematics has been called the most stupendous of all fictions – **Hill.**
- Mathematics is the music of reason. The musician feels mathematics, the mathematician thinks music. – **Sylvester.**
- "What use is this Calculus?"
 "What use this baby? Wait and See" - **Newton.**
- Mathematician, like a painter or a poet, is a maker of patterns: If his patterns are more permanent than theirs, it is made with ideas – **G.H. Hardy.**
- The mathematician's patterns, like the painter's or the poet's must be beautiful; the ideas like the colours or the words, must fit together in a harmonious way. Beauty is the first test: there is no permanent place in the world for ugly mathematics. – **G.H. Hardy**
- In the Greek mathematical Forum, young Euclid was present to bore'em. He spent most of his time drawing circles sublime and crossing the pons asinorum. What an artist, Euclid was!

NUMBERS AND FACES

The Kingdom of Number is all boundaries
 Which may be beautiful and must be true;
 To ask if it is big or small proclaims one
 The sort of lover who should stick to faces.

Lovers of small numbers go benignly potty,
 Believe all tales are thirteen chapters long,
 Have animal doubles, carry pentagrams,
 Are Millerites, Baconians, Flat-Earth-Men.

Lovers of big numbers go horridly mad,
 Would have the Swiss abolished, all of us
 Well purged, somatotyped, baptised, taught
 baseball:

They empty bars, spoil parties, run for Congress.

True, between faces almost any number

Might come in handy, and One is always real;
But which could any face call good, for calling
Infinity a number does not make it one.
– Judith Baumel

Call it windfall
finding your calculation
come, finally,
to the last decimal point of pi.
In the silence of January snow
a ladybug survives the frost
and appears on the window pane.

She draws a tiny space.
Hesitant. Reverses. Forward,
like a random-number generator,
the walking computer frog
who entertains mathematicians.

Think of the complexity
of temperature, quantification
of that elusive quality —heat.

Tonight, for instance,
your hands are colder than mine.
Someone could measure
more precisely than we
the nature of this relationship.

Learn the particular strength
of the Fibonacci series,
a balanced spiraling
outward of shapes,
those golden numbers
which describe dimensions
of sea shells, rams' horns,
collections of petals
and generations of bees.

A formula to build
your house on,
the proportion most pleasing
to the human eye.

– Judith Baumel

SIMPLE ARITHMETIC

What is two plus two? Here are the answers given by ten-year-old school pupils over the last six decades:

1954 : 'Four, of course.'
1964 : 'I think it's three but it's the method that counts.'
1974 : 'Just a second while I get our calculator.'
1984 : 'Just a second while I open my computer to find the answer.'
1994 : 'Just a second while I check the addition home page.'
2004 : 'Just a second while I check with my friends on Mxit.'
2014 : Hi! Let me check the answer with WhatsApp.

"Thirty-nine is a sweet number. It's thirteen times three. It's also the sum of five prime numbers in a row - 3,5,7,11,13. And if you add the first three powers of three, 3 to the first, 3 to the second, and 5 to the third, you get thirty-nine." Amy stared at him. "How did you know that?" "What do you mean? It's obvious."

– Rick Riordan, *The Maze of Bones*

"It is impossible to be a mathematician without being a poet in soul."

– Sophia Kovalevskaya

TRIANGLES

Types of triangles?
More than 5,
Have three angles,
Have three sides...

Right ones first,
Pythagoras knows,
All right triangles,
Fabulous those!
Now we've started,
Getting loose,
Right tri's long side?
Hy-pot-e-nuse!

Equilateral?
Sides the same,
Angles equal,
It's their game!

Isosceles?
2 equal sides,
2 equal angles,

Playground slides!

Scalene triangles,
Have one catch,
Different sides,
No angles match!

Acute triangles?
Sides in threes,
All angles less,
Than 90° ,

Obtuse triangle?
Angle measure,
More than 90° ,
What a pleasure...
Those are 6...
Types of tri's
Have 3 angles,
Have 3 sides...

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CONCLUSION

It is concluded from the study that teaching and learning mathematics by involving poetry and humour has yielded very successful result. The students attentively involve in the process of learning without any mental fatigue thereby increasing interest in solving mathematical problems.

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