

Author: PRADEEP KOSHY

Category: Research Papers

Sub-Category:

Physics.

Date published : 18-10-15

Title : Revised Domain of Relativistic Mechanics.

Keywords:

Number Theory, Trigonometry, Pythagoras Theorem, Right Triangles., Special Theory of Relativity.

PROOF

Introduction

Since the mathematicians invaded Relativity, I do not understand it myself anymore: Albert Einstein.

This statement by Einstein, gives the general feeling that he was not convinced that the Theory of

Relativity was absolute. The onus is on me, therefore to prove that the Special Theory of Relativity, has

limitations and domain of relativistic mechanics is one-third the speed of light., for particles of masses

greater than 1 kg, time events greater than 1 second as well as length contraction greater than

300000kms(approx.)

I will start with Einstein's own words

"If you can't explain it simply, you don't understand it well enough."

Time travel is therefore, impossible by means of STR. Science is really about demystification. The

crowning glory of my achievement is merely Number Theory and Miracle Equation are utilized to achieve this. We will prove it in four parts, Part A, Part B, Part C & Part D

Part A

Abstract:

It is astonishing to note that the 2500 year old, Pythagoras Theorem could be revolutionarily analysed and interpreted, in a two variable case, with the aid of axioms that have been deduced by me.

Revolutionary analysing and interpreting the 2500 year old Pythagoras theorem. Understanding the Pythagoras theorem, is essential or played a very great role in my analyzing the Special Theory Of Relativity. Now, what I have deduced regarding the Pythagoras theorem.

.If the hypotenuse of a right triangle, is the average of two numbers say, A and B ie $(A+B)/2$, then the legs are $(A-B)/2$ and \sqrt{AB} . Hence in my peer-reviewed work "DOMAIN OF RELATIVISTIC MECHANICS", I have taken t' as $|\sqrt{AB}|$ and t as $(A+B)/2$ and v . Hence excepting (v/c) , all variable values in the modified time dilation equation will have rational values and no decimal nonterminating-non repeating values or irrational values..

General Theorem regarding the Pythagoras theorem: If the hypotenuse of a right triangle is m^2+n^2 , then the legs are m^2-n^2 and $2mn$, where m, n are real numbers greater than 0 and $m>n$.

Another way of stating the Pythagoras theorem is, if the hypotenuse as $[(N-1)+X^2]$ and then the legs could be $[(N-1)-X^2]$ and $\{2X \sqrt{(N-1)}\}$.

If the hypotenuse is product of two real numbers N and X ie (NX), then the legs

are $(N-2)X$ and $\{2X\sqrt{N-1}\}$. --- the revolutionary concept

Putting suitable values in the above Pythagorean triplets can be generated.

Suppose the hypotenuse $c=41=NX$ and one of the legs is 9 ie $a=9=(N-2)X$.

To find the other leg ,we note $c-a=2X$, hence $X=\frac{1}{2}(c-a)=16$ in this case.

Since $NX=c$ then $N=c/X=41/16$. Hence the other leg $b=\{2X\sqrt{N-1}\}=2(16)\sqrt{\{(41/16)-1\}}$
 $=32\sqrt{(25/16)}=32(5/4)=40$

The above procedure is useful when hypotenuse and a side are given, then to find the other side

. Let us try another example.where $c=39$, $b=15$.Here $c=NX$ and b is taken as $(N-2)X$

then $2X=c-b=39-15$ ie $X=12$ and $N=c/X=39/12$ therefore $a=2X(\sqrt{N-1})=2(12)\sqrt{(39/12)-1}$
 $=24(\sqrt{27/12})=24\sqrt{(9/4)}=24(3/2)=36$.The role of a and b can be interchanged. It is the case considered in revised special relativity domain verification.

Assuming the legs are given to find the hypotenuse ie $a=6$ and $b=8$ to find c .In this case the role of a and b cannot be interchanged. $(N-2)X$ is the longer leg for large values of N .

$a=(N-2)X=6$ and $b=\{2X\sqrt{N-1}\}=8$.To find c , $a/b=(N-2)/\{2\sqrt{N-1}\}$

$3/4=(N-2)/\{2\sqrt{N-1}\}$ ie by guessing we find $N=5$,Normally to find the value of N

,one need to solve a hard quadratic equation. Now $X=2$, since $3X=6$

substituting in the value of $a=6$. Now $c=NX=10$ which is the value of the

hypotenuse .Let us consider another example. Let $a=40$ and $b=9$, $a=(N-2)X=40$ and

$b=2X\sqrt{N-1}=9$, $a/b=(N-2)/\{2\sqrt{N-1}\}$ ie $40/9=(N-2)/\{2\sqrt{N-1}\}$

reduces to $81N^2 - 6724N + 6724=0$ On solving $N=82$,hence $X=1/2$,therefore

$c=NX=41$.

Some interesting facts observed.

Where $c=\sqrt{a^2+b^2}$ ie in the conventional approach a would become equal to b

with the result c would become irrational and nonsensical. Also, there is no way

in preventing a and b to be same. When I looked profoundly into that, I found

an irrational value is immeasurable, varying, not unique, and very well inexact and only can be considered to be approximate in value. That it does not have any rational basis and should be filtered and prevented. Whereas, in the journal approach, alternative to the same, there is no possibility of the hypotenuse to be irrational and only one of the legs could be irrational. In the case considered, the legs could be interchanged, with the result we have filtered the irrational values, in the alternate sophisticated approach to the Pythagoras theorem. We are compelled in special relativity equations, for hypotenuse c or numerical value of t and a leg a or b equal to $(N-2)X$ and numerical value of t' , both to have known positive rational values, hence only v may assume decimal values, which is permissible. Albeit, v/c may turn out to be decimal in value, hence the necessity of it to be approximated in the journal work or my approach persists, still we are able to nail the range of values t, t' and v/c are able to attain. Hence the domain of relativistic mechanics can be obtained.

P.N If N is large (greater than 100) or something, the longer leg is always $(N-2)X$ and the smaller leg is $\{2\sqrt{(N-1)}(X)\}$ and in all the cases the legs are never equal.

Conclusion

Since the Pythagoras theorem has been decoded and Special Relativity utilises the same, it has been found it puts severe restrictions on SRT equations and it could be checked, verified and analysed. SRT is no longer valid in its claimed domain (will be proved later) and it needs revision and correction under this scrutinising.

Part B

MIRACLE EQUATION-CAN BE USED TO SOLVE 3 VARIABLES IN A SINGLE EQUATION

Keywords : Number Theory, Algebraic Identity , Theorem, SRT

Abstract : Before 2015, you required 3 equations to solve 3 variables. Now it isn't necessary. Seems impossible , but here is the proof. PROOF: MIRACLE EQUATION-CAN BE USED TO SOLVE 3 VARIABLES IN A SINGLE EQUATION.

MIRACLE EQUATION: $[(NX)^2 - \{(N-2)X\}^2] = [N-(1-X^2)]^2 - [N-(1+X^2)]^2 = 4(N-1)X^2$ The above three way related algebraic formulae or equation or Algebraic Identity which is true for all real or complex values of N and X , is actually analogous to the equation $[A^2 - B^2] = C^2 - D^2 = E$ where $A = NX$, $B = (N-2)X$, $C = [N-(1-X^2)]$, $D = [N-(1+X^2)]$ & $E = 4(N-1)X^2$ where .A,B,C,D & E are five variables. One way of analyzing the same is, if anyone chooses one of these five variables , either A,B,C,D or E, the remaining 4 variables can be found out , by applying suitable values (by trial and error) to N and X , in the considered variable and the other variables turn out correspondingly to the same. Viewed alternatively, $A^2 - B^2 = C^2 - D^2$. Suppose one chooses $C=1174$. In my convention

$C = [N - (1 - X^2)]$, I arbitrarily, choose $X=15$, therefore $N=950$, therefore $D=724$, $A=14250$ and $B=14220$. B , D and A could be found without calculators and that is mysterious. Even E can be found out. The second case or application is given below. Now, there is an interesting application wherein, we can utilize this equation to solve 3 unknown variables in a single equation. Assuming the 3 variable equation is of the form $ax + by + dz = k$ where a, b, d are coefficients and x, y, z are variables and k is the constant. Solution is given by $x = A^2/a$, $y = B^2/(-b)$ and $z = D^2/d$, since equation is of the form $A^2 - B^2 + D^2 = C^2$ Hence the solution to the equation $2x + 3y + 4z = 16$. Here $C = 4$. Arbitrarily selected values of $N = 1$, $X = 2$ to satisfy $C = [N - (1 - X^2)]$ Ergo, $x = 2$, $y = -4/3$ and $z = 4$. Alternatively, let us substitute X as any rational number. X can assume infinite values. (Albeit, if X is real i.e. for instance the irrational number case, we need not get exact solutions and might therefore get only approx. solutions). We could generate different values of $N = C + 1 - X^2$, corresponding to X equal any rational number. We can thereby, get infinite solutions to this equation, since the three variables are related to N and X only. We could resort to algorithm and programming at this stage, since a general equation is involved. Please note that $C = \sqrt{k}$. PN: When k is a perfect square, calculations are simple. Otherwise, multiply k by itself. For the equation to remain unchanged multiply each term of LHS by k and then resort to the steps like below. Suppose one need to solve $2x + 3y + 4z = 13$. Taking the necessary steps, the equation becomes i.e. multiplying each term in the given equation by $k = 13$, it transforms into $26x + 39y + 52z = 169$, therefore $x = A^2/a$, $y = B^2/(-b)$ and $z = D^2/d$. Here $C = 13$,

If selected value of $X=2$, $N = k + 1 - X^2 = 13 + 1 - 4 = 10$. Therefore $x = 400/26 = 200/13$, $y = 256/(-39)$ and $z = 25/52$ Take another value of $X = 15$, then $N = k + 1 - X^2 = 13 + 1 - 225 = -211$, $A = NX = -3165$

$B = (N - 2)X = -3195$ $D = [N - (1 + X^2)] = -437$ $x = A^2/a = 385277.8846$, $y = B^2/(-b) = -261744.2308$ and $z = D^2/d = 3672.480769$. Verification $26x + 39y + 52z = 169$ $26(385277.8846) - 39(261744.2308) + 52(3672.480769) = 169$ (hence We can obtain infinite solutions to (x, y, z) for rational

or real number solutions, but they need not be exact solutions, for set of irrational numbers. Suppose the equation is of the form $lx + my + nz = k$ where if $l = a$ then $x = A^2/a$, if otherwise $l = -a$ then $x = A^2/(-a)$ and if $m = b$ then $y = B^2/(-b)$, otherwise if $m = -b$ then $y = B^2/(b)$ and finally if $n = +d$ then $z = D^2/d$, otherwise if $n = -d$ then $z = D^2/(-d)$. Hence x, y and z can attain all sets of values pertaining to real numbers, where $a, b, c, \& d > 0$. Hence, using a supercomputer or quantum computer a billion solutions can be obtained in a few minutes. The above equation can be treated as a Diophantine Equation, since integer and rational solutions of the same are exact. Conclusion .

The modified form of miracle equation is akin to special relativity equations brought to the standard form ie $(E/c)^2 = A^2 - B^2 = C^2 - D^2$, equivalent to the altered time dilation equation $(t')^2 = (t)^2 - (tv/c)^2$ is in that form, hence if we are aware of merely the fixed value (t') , the remaining two variables are determinate ie t and tv/c , implies t and v could also be found out. I mean the numerical values they attain (these variables) ie the general solution can be determined. Also, in the time dilation equation all the variables, have the same dimensions and units. Finally, it (Miracle Equation) enhances

the trinitarian concept . Well, the negative aspect of this article, someone could argue, one doesn't obtain all the solutions in one shot- but the general solution, which of course is the larger and greater picture and the absolute necessity.

Part C

Revised Domain of Relativistic Mechanics.

Keywords:

Relativity, time dilation, length contraction, mass variance, number theory, algebraic formulae

Abstract:

It is astonishing to note that the Special Relativity Theory Equations are incongruous beyond one-third the speed of light, by mere Number Theory considerations, specifically 'time dilation' and 'length contraction' equations. Nevertheless, there is an exception to this theory, for particles of masses less than 1kg, or time intervals between events which are less than 1s or length contraction less than 300000km, where it could be absolutely accurate as Einstein predicted and therefore it implies, these could change up to only 6.07%, approximately.

Proof

Introduction

Since the mathematicians invaded Relativity, I do not understand it myself anymore: Albert Einstein.

This statement by Einstein, gives the general feeling that he was not convinced that

the Theory of Relativity was absolute. The onus is on me, therefore to prove that the Special Theory of Relativity, has limitations and domain of relativistic mechanics is one-third the speed of light., for particles of masses greater than 1 kg, time events greater than 1 second as well as length contraction greater than 300000kms(approx.)

I will start with Einstein's own words

"If you can't explain it simply, you don't understand it well enough."

Time travel is therefore, impossible by means of STR. Science is really about demystification.

The crowning glory of my achievement is merely Number Theory and Miracle Equation are utilized to achieve this. Miracle Equation is an equation, capable of solving 3 variables in a single equation—

Proof:

The absolutely correct form of the Special Theory Of Relativity equations is $t = |\gamma| t'$,.where t and t' are preconditioned as positive .Hence ,even considering equation $(t')^2 = (t)^2 - (tv/c)^2$ is in the absolute sense wrong. Actually, in this equation t' , t , and tv/c are definitely positive .Examining the errors in the time dilation equation. We could have allowed γ to be negative. Consequently, the errors are t is related to negative of t' , This can happen when t and t' , are of opposite signs. Consider the situation when t is negative in the equation $(t')^2 = (t)^2 - (tv/c)^2$, for tv/c to be positive , v has to be negative. This I would say this is a gargantuan of error and hence the time dilation equation $(t')^2 = (t)^2 - (tv/c)^2$ is terribly riddled with loopholes. Therefore the equation is fundamentally flawed. This equation needs revision. .As stated earlier, the absolutely correct form of the Special Theory Of Relativity equations is therefore , $t = |\gamma| t'$. Let $X = t'$, $Y = t$ and $Z = tv/c$ where X, Y and Z can assume only positive real values. The time dilation equation gets modified to $X^2 = Y^2 - Z^2$ in which ,

units and dimensions are same for each term in the equation. Further modified as
 $X = \sqrt{AB}$, $Y = (A+B)/2$ and $Z = (A-B)/2$, here A and B are variables assume numerical values, only positive real values and is identical to the miracle equation. Because miracle equation actually is an algebraic equation $AB = [(A+B)/2]^2 - [(A-B)/2]^2$. Note t' , t , and tv/c , X, Y and Z, AB, $(A+B)/2$ and $(A-B)/2$, are all positive. $(A+B)/2$ and $(A-B)/2$ are positive implies $A > B$, $A > 0$ & $B > 0$. Also, analogously for $t > tv/c > 0$ implies $B > 0$.

Now substitute $(A-B)/2$ for tv/c and let $A = k$ (some arbitrary variable). Therefore B derived, becomes in terms of k and tv/c as $B = (k - 2tv/c)$. Now $B > 0$ implies $k - 2tv/c > 0$ results in $tv < ck/2$. Now from the properties of inequalities $a < b$ implies a at most equal to b. Therefore maximum of $tv = ck/2$.
 .(pls note this is one of the most important result.)

Pls check now how the equation has transformed
 $(k)(k - 2tv/c) = (k - tv/c)^2 - (tv/c)^2$. Note this is analogous to the equation, ie time dilation equation $(t')^2 = (t)^2 - (tv/c)^2$. and identical in numerical values, the variables could or may assume in the equation.

∴ The obviousness of $a < b$, implies maximum of a could be equal to minimum of b.

. The transformed form of our inequality, $tv < ck/2$ is max. of $tv =$ min. of $ck/2$.

Note min. of RHS is min. of k times $c/2$. Please note, since $k - tv/c = t$, equating second terms from identical equations mentioned above, therefore $k = t + tv/c$, minimum of k happens when $v = 0$ and is t ie RHS minimum is $t(c/2)$, whereas LHS is max. of tv is t times max of v. Cancelling out, equal factor t from both sides, we get max. of $v = c/2$ or $v < c/2$.

TIME DILATION EQUATION

$$t = t' / \sqrt{1 - v^2/c^2}$$

where t is the time measured in S frame is slower than the time t' measured in

inertial frame S' by time dilation equations. In all these cases, c stands for velocity of light and equal to it, whereas v is the velocity of the frame S' with respect to S . On rearranging the relativistic equation, simplifies to $(t'c)^2 = (tc)^2 - (tv)^2$, which finally leads to $(t')^2 = (t)^2 - (tv/c)^2$. Note that each term in the modified form of the TIME DILATION EQUATION has the same units. Units have no relevance and it can now be considered part of Number Theory. Comparing both these equations, MIRACLE EQUATION and modified form of TIME DILATION EQUATION, vital observations are made ie

Miracle Equation reduces to

$$[(NX)^2 - \{(N-2)X\}^2] = 4(N-1)X^2, \quad tv/c \text{ corresponds or is equal to } (N-2)X \text{ and}$$

t corresponds to $(N)X$

$$\text{ie } (tv/c)/t = (N-2)X / (N)X$$

ie $v/c = (N-2)/N$ Therefore ie $v/c = (N-2)/N$ where, c stands for 3 meaning

300000 kms/s, $N=3$ therefore $v = 3-2=1$ meaning 100000kms/, (since $v/c <$

$\frac{1}{2}$, proved earlier. Pls note there is only value of ie $v/c = (N-2)/N$ satisfying

$v/c < \frac{1}{2}$, corresponding to $c=3$ hundred thousand kilometers per second, hence v is

one hundred thousand kilometres per second, the maximum value it can attain.)

Therefore the Special Relativity Theory Equations are incongruous beyond one-third

the speed of light, by mere Number Theory considerations, specifically 'time dilation'

and 'length contraction' equations. Nevertheless, there is an exception to this theory, for

particles of masses less than 1kg, or time intervals between events which are less than 1s

or length contraction less than 300000km, where it could be absolutely accurate as

Einstein predicted and therefore it implies, these could change upto only

6.07%, approximately.

For proof to the exception go to the journal paper (with special reference to page 566), mentioned below

INTERNATIONAL JOURNAL OF ENGINEERING AND SCIENTIFIC AND
ENGINEERING RESEARCH AUTHOR PRADEEP KOSHY TITLE
DOMAIN OF RELATIVISTIC MECHANICS ISSUE 4 VOL 4 APRIL 2013
PAGE560

Now proof for the exception

----- .•-----

PartD

1.Introduction

Einstein's Theory undermined.

A century old theory is being investigated by a mind for 20 years.The result in this case, Einstein's theory seems to be shattered.We will prove it in 3 parts.

PART1:

A three way related algebraic formula developed by me and its significance like number theory
Could be the basis of even a theory like Special theory of Relativity.

PART2: In the shadow of Einstein.

PART3: Relativistic Mechanics probed to find the domain of it. Note that, part3 might seem independent, but the formula derived in part1 has a bearing on this.

Part – 1:

.Lord Kelvin's Statement

"I often say, if you can express what you know of something, in numbers, you know something about it.

Otherwise, your knowledge is of a meager and unsatisfactory kind. It may be the beginning of knowledge, but you have scarcely in your thoughts advanced to the stage of science, whatever the matter may be".

.The bombshell of the 21st century:

An algebraic formula developed by me I was preparing for SAT almost 2 decades back. I studied and observed squares of numbers.

$$20^2=400$$

$$21^2=441$$

$$22^2=484$$

$$23^2=529$$

$$24^2=576$$

$$25^2=625$$

$$26^2=676$$

$$27^2=729$$

$$28^2=784$$

$$29^2=841$$

$$30^2=900$$

The difference between the first and last numbers, second and second last numbers and so on are as follows: 500, 400, 300, 200 and 100. This difference looked unbelievable to me.

To my observation, it was stunning to observe that the squares of the difference of numbers was falling into a definite pattern.

$$30^2 - 20^2 = 500 = [26^2 - 24^2] \times 5$$

$$29^2 - 21^2 = 400 = [26^2 - 24^2] \times 4$$

$$28^2 - 22^2 = 300 = [26^2 - 24^2] \times 3$$

$$27^2 - 23^2 = 200 = [26^2 - 24^2] \times 2$$

$$26^2 - 24^2 = 100 = [26^2 - 24^2] \times 1$$

International Journal of Scientific & Engineering Research, Volume 4, Issue 4, April-2013 At this stage, insight, intuition and creativity had been triggered. The pattern, was further checked and studied by extending it to 10-20 range.

$$10^2 = 100$$

$$11^2 = 121$$

$$12^2 = 144$$

$$13^2 = 169$$

$$14^2 = 196$$

$$15^2 = 225$$

$$16^2 = 256$$

$$17^2 = 289$$

$$18^2 = 324$$

$$19^2 = 361$$

$$20^2 = 400$$

$$20^2 - 10^2 = 300 = 60 \times 5$$

$$19^2 - 11^2 = 240 = 60 \times 4$$

$$18^2 - 12^2 = 180 = 60 \times 3$$

$$17^2 - 13^2 = 120 = 60 \times 2$$

$$16^2 - 14^2 = 60 = 60 \times 1$$

These observations, were further extensively checked and it led me to the formula.

$$[N^2 - (N-2)^2]X = 4(N-1)X = [N-(1-X)]^2 - [N-(1+X)]^2 \text{ where } N \text{ and}$$

X are are two variables.

Now, it is the triumph of creativity. It is a three way related formulae and hence, can be used to pose a question like

given an equation,

$$[A^2 - B^2] C = D = E^2 - F^2 \text{ where given } E \text{ and } F \text{ to find } A, B, C \text{ and } D. \text{ or alternatively}$$

posed as given A and C, to find B, D, E and F. where the capital letters denote numbers, either

Real or Complex. This is a formula so revolutionary that I would call it miracle equation. It is

God's gift to me. Note, that my formula is capable of solving 2 variables in a single equation

, which is conventionally impossible from a mathematical point of view. Also, understand that

The modified form of special theory of relativity equations contain 3 variables. For instance

$$(t')^2 = (t)^2 - (tv/c)^2. \text{ Using my formula, 2 of the variables are determinate. Hence, the only}$$

remaining variable, which is the only unknown now could be found out. In effect, in totality, in reality,

all the variables can be determined or solved ie meaningful interpretation of the same can be

made. From, hereon, we proceed keeping this in mind. No longer, is the Special Theory of Relativity

Equations mysterious, inscrutable or perplexing. Armed with a formula like the

above, we will pursue the same.

Pythagoreans believed that the number 4 governs the world. It is there in my formula.

Number theory can be the key to the understanding or unlocking the limits of the special theory of Relativity. It reinforces the maxim "Mathematics is the Mother of all sciences".

VITAL DEDUCTION:

The formula developed by me, serves as a way of solving two variables minimum or upto 3, maximum in a single equation relating two sets of difference of squares of numbers.

Hence, it is a paradox from mathematical point of view, although ,it is only a particular solution.

That can be miraculous, in nature, will be proved later,when considered it is analogous to special relativity equations in number theory form. Something of trivial significance, is mentioned below.

.Deviation :

(Formula has one more use)

Let me rearrange the formula:

$$[\sqrt{\{N^2 - (N-2)^2\}X^2} + [N - (1+X)]^2 = [N - (1-X)]^2 \text{ ie of the form } A^2 + B^2 = C^2$$

Hence,

Pythagorean triplets can be generated by using this formula.

.IN THE SHADOW OF EINSTEIN –

Applications in Special Theory of Relativity

The formula was invented 2 decades back. It was rejected, or considered trivial among most people I met or submitted, in India. Subconsciously, feeling always, analogous to Special Relativity-- those issues, were boiling in my mind, for more than a decade, when at last, it was serving as a catapult to my long standing cherished view, that it could be applied to Special

Relativity equations and the domain of Relativistic Mechanics could be identified. I was awestruck at how I arrived at it.

The sequence of events:

Knowledge of inequalities (Algebra branch) is required in order to understand this.

TIME DILATION EQUATION

$$T = t' / (\sqrt{1 - v^2/c^2})$$

Where t is the time measured in S frame is slower than the time t' measured in inertial frame S' by time dilation equations. In all these cases, c stands for velocity of light and equal to it, whereas v is the velocity of the frame S' with respect to S . On rearranging the relativistic equation, it simplifies to

$$(t'c)^2 = (tc)^2 - (tv)^2, \text{ which finally leads to } (t')^2 = (t)^2 - (tv/c)^2$$

We proceed like this: At this stage, my invented formula's most simplified form will be adequate in proving my contention. A simpler form of my formula could be treated as the formula $4AB = (A+B)^2 - (A-B)^2$, when we apply $(N-1) = A$ and $X = B$ which on further simplification leads to $AB = [(A+B)/2]^2 - [(A-B)/2]^2$ by rearranging, will thereby have the merits and advantages of my formula, which is worth mentioning.

Please note also, in reality,

$$(A+B)/2 > (A-B)/2 \text{ for both } A \text{ and } B \text{ greater}$$

than 0. Please note there are 2 cases involved below.

..CASE1

P.N There are three boards PHYSICS, MATHEMATICS and NUMBER THEORY which have to be examined in a sequential order 1,2,3,4,

BOARD A/PHYSICS

STEP1

$(t')^2 = (t)^2 - (tv/c)^2$, time dilation equation modified form involving 3 variables, which have their usual meanings.

STEP2

Note, that each term of the above equation has the same unit. (second squared)

STEP3

But $t > 0$ and $t' > 0$ and $t < k$, hence maximum of $t = k$, comparing physics equation divested of its units, with mathematics equation

BOARD B/

NUMBER THEORY

STEP1

$AB = [(A+B)/2]^2 - [(A-B)/2]^2$ is true and has the properties of miracle equation

STEP2

All Equations are analogous to $X^2 = Y^2 - Z^2$, in which X equals square root of (AB) or $[k(k-2w)]$. This is the instance when physics and mathematics are identical.

STEP3

Maximum of $tv/c = kv/c$ is the first value of w.

STEP4

Equating first value of w with second value, we get $kv/c = k/2$. Cancelling out k from both sides in it and rearranging, we get maximum of $v = c/2$ units.

BOARD C

\MATHEMATICS

STEP1

$(k)(k-2w)=(k-w)^2 - (w)^2$ is an algebraic identity involving 2 variables.

STEP2

Further let $Z=w= tv/c$ above.

Let us introduce $w= tv/c$, then $(k)(k-2tv/c)=(k-tv/c)^2 - (tv/c)^2$

Since $A>0$, $B>0$ & $A>B$, we get $(tv<ck/2)$,

Also $(A+B/2)>0$

gives $(tv<ck)$,

ergo, $tv<ck/2$ is the deduction. Hence, the maximum value of $tv= ck/2$, since even $(A-B/2)>0$

STEP3

It follows since max. of $tv= ck/2$, therefore, max. of $tv/c=k/2$. This is the second value of w .

EXTREMELY IMPORTANT

In the basic equation $[N^2 - (N-2)^2]X=4(N-1)X=[N-(1-X)]^2 - [N-(1+X)]^2$

where N and X are two variables, N , $(N-1)$ and $(N-2)$ ought to be positive which implies k has to be greater than 1.

.CASE2

For values of $k<1$,

the valid equation is

$$t = t' / (\gamma (1 - v^2/c^2))$$

,where Einstein's special theory of relativity be valid(or absolute) and the limitations,I tried to impose upon invalid.Hence v almost could be equal to c ,implies $t < 1$,which also implies $t' < 1$.

Conclusion

Cosmic speed is one-third the speed of light for particles of masses greater than 1kg.

11.References

[1]University Physics by Sears,Zemanski &Young.

[2]The Feynmann Lectures by Richard P.Feynmann,Matthew W.Sands &Robert B. Leighton.

[3]Special Theory of Relativity by Resnick.

[4]Fundamentals of Physics by Halliday,Resnick &Walker.

[5]Superstrings and the search for the Theory of Everything by David F. Pe