The Art of Problem Solving (AOPS)

Maher Ali Rusho✎

Dedicated to
My famma (Aunt) Khuki
My Fupa (uncle) Sadi

Abstract: Yeah!!I touch the milestone of publishing 15 Research paper at the age of 15 . My research publications is now equivalent to my age!!So to celebrate this I am going to write a paper that will help every people to take the feel in math . Basically Teachers in the classroom can't make feelings of math to the student .They always like to tell math is deferent than others . It is a bit harder . Math is not for everyone ,it is only for geniuses bla bla……. . This type of stupid telling often decreases the math potential of a student . I have seen many math genius es later fields medal winner was demotivated by listening this type of foolish talking . If you want to learn more about fields medal life at school , then read this authentic Blog : https://www.lesswrong.com/posts/MsTu3dqf7BnEupoW4/fields-medalists-on-school-mathematics
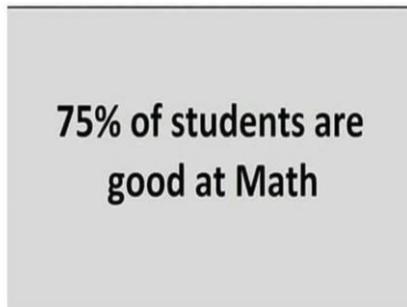
So what is the solution of it . To raise the math potentiality of every primary student . I am going to write this paper , It will be understood by every math haters , and will also rise the interest of primary level or 5th to 6 th grader student s . TO understand this paper , you just need enthusiasm leisure time and just need to know about simple fraction and reasoning

I'st Dangerous Math

Find the Sum Of this Infinite Series :-
$$1/(1*2) + 1/(2*3) + - - - - - + 1/(98*99) + 1/(99*100)$$

After Seeing this most students expression will be like this

75% of students are good at Math

I belong to the rest 14%

SRC:https://memezila.com/75-percent-of-students-are-good-at-

But please wait for a minute and think . 😵 If you see a big problem like this always always Use the method Divide and conquer .

Like _

Let's add the first two term of this series : And Find some conclusions =>
$$1/(1*2) + 1/(2*3) = 2/3$$
$$1/(1.2) + 1/(2*3) + 1/(3*4) = 3/4$$

Again Iterate This process for final and find it's pattern
$$1/(1*2) + 1/(2*3) + 1/(3*4) + 1/(4*5) = 4/5$$
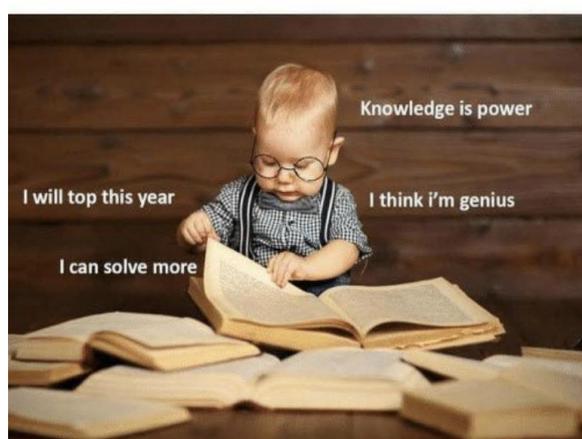
SO DID YOU FIND IT UREKA UREKA !!! I AM ARCHIMEDIS (spelling mistakes)
The general solution of this pattern is then ;
$$1/(1*2) + 1/(2*3) + - - - - - - +1/(N-2)*(N-1) = (N-1)/N$$

AFTER FINDING SOLUTION FEELING LIKE THIS

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☎ +

When I accidently solve two problems of Math

$$1/(3\sqrt{2}+4) + 1/(4+\sqrt{14}) + 1/(\sqrt{14}+2\sqrt{3}) + 1/(2\sqrt{3}+\sqrt{10}) + 1/(\sqrt{10}+2\sqrt{2}) + 1/(2\sqrt{2}+\sqrt{6}) + 1/\sqrt{6} + 2 = ???????$$

Teacher :Hmm !! I think it is not possible

Student : Nope !! It is just a^2-b^2 law

Teacher : What Are you saying I have Done M.sc from Harvard University !!!!!!

The above Condition is true in many school and college ! Students are more brilliant than teacher s in most reasoning case !!

Buy The way how this is interrelated With A^2-b^2 law   !!

Look the first term of the series $1/3\sqrt{2}+4 = (1/3\sqrt{2}+4)*(3\sqrt{2}-4)/3\sqrt{2}-4 = (3\sqrt{2}-4)/2$

So apply a^2-b^2 law and sum up the all fractions !!!

$$(3\sqrt{2}-4)/2 + (4-\sqrt{14})/2 + (\sqrt{14}-2\sqrt{3})/2 + (2\sqrt{3}-\sqrt{10})/2 + (\sqrt{10}-2\sqrt{2})/2 + (2\sqrt{2}-\sqrt{6})/2 + (\sqrt{6}-2)/2 = (3\sqrt{2}-2)/2$$

THIS SERIS IS CALLE TELESCOPING SERIE S!! BECAUSE IT ENDS UP LIKE TELESCOPE S 🔭

Abid's Paradox

Ok now I will tell you a true story behind the naming of this paradox . Actually It is made my friend Abid (Don't fear He is not a math genius ,he accidentally made it) I read in grade :09 of Monipur High School .It was the boring math class . Teachers is doing the fourth chapter of math (I don't want to tell the name of that teacher sorry)) The Inequalities . He writes onto the board inequalities is same is equalities in doing operation in math . But if you reverse the number then sign changes . If you multiply it by negative integer then also Sign changes ——if you————………..

A backbencher student raise the hand and ask the teacher a question . From your statement , we know

3>-1

Then if we reverse It it become 1/3<-1……..What !!! A positive integer is less than a negative integer . The teacher shout and said How dare you . I am M.SC in math from Chittagong University . You have no base in math . You don't know how to use it . You come here to disturb the teachers and the student…… . The teacher is screaming . And then bell rings and class finished . I was present at Thai moment and I understand the significance of this question . I go to aid and tell him You have done a wonderful Question But In your text -book some information is missing . Here is real

Law if you reverse the modulo of a number then sign changes . So al equation is right . From today - $[1/3] < [-1] = 1/3 < 1$.

CONCLUSION:

Math Is For Everyone Because It Is Created By Humans Not God . Like Other Subject If You Get Fun With This You Will Be Also A Genius . In Fact Children's Are Mostly Gifted In Math Because When They Are Young They Had No External Pressure . They Can Think Freely . They Can Proof Theorem From Scratch

RESOURSES:

1. Book Goniter Monche Written By Ahmmed Zawad Chowdhury
2. Book Goniter Sopnojatra Written By Ahmed Zawad Chowdhury
3. Inspired By : Https://Artofproblemsolving.Com
4. Memes Reference Used In Article Https://In.Pinterest.Com/Pin/97249673195302889/
5. Https://Memezila.Com/75-Percent-Of-Students-Are-Good-At-Math-I-Belong-To-The-Rest-14-Meme-1020