CHINMAYA VIDYALAYA, NEW DELHI PRESENTS

E-NEWS LETTER 2023

MATHMUSING

MATHEMATICS DEPARTMENT

FROM THE PRINCIPAL'S DESK

Hari Om

The theories and concepts given in Mathematics help us understand and solve various types of problems in academic as well as in real life situations. The magic of Mathematics is all around us. It is enchanting to see how it is all pervasive, yet hidden. Whether in the market, calculating the rate of interest, totaling marks or telling the time, Mathematics creeps in silently in almost all our activities from morning to evening. It is a subject of logic. Learning Mathematics will help students to grow their problem-solving and logical reasoning skills as solving mathematical problems is one of the best brain exercises.

Students often ask the question-What is the need for and importance of Mathematics in daily life? It makes our life orderly and prevents chaos. Certain qualities that it nurtures are- the power of reasoning, creativity, abstract or spatial thinking, critical thinking, problem-solving ability, and even effective communication skills.

It leaves us wondering as to why, still, most of us have a fear of Mathematics. Well, it starts from the mind. It should not be taken as a forceful intrusion but as a sweetener to flavour our life. Positive reaffirmations and making Mathematics fun can be really helpful in doing so. One way to do this is to connect math to the child's interests. For example, if the student likes sports, use sport-related word problems.

This time the Mathematics e-newsletter 'Math Musings' brings to us a kaleidoscope that will help us see the different hues of the subject from different angles. The collection of articles, puzzles and games will surely help all of us rediscover our connection with this subject.

May Pujya Gurudev's blessings multiply our happiness and subtract all sorrows and fears.

Happy reading!

Principal
Ms. Archana Soni

EDITORIAL

Hari Om

Let's peep into the subject from Bertrand Russell **(British Philosopher a Mathematician)** eye: "Mathematics, rightly viewed, possesses not only truth, but supreme beauty – a beauty cold and austere, like that of sculpture, without appeal to any part of our weaker nature, without the gorgeous trappings of painting or music, yet sublimely pure, and capable of a stern perfection such as only the greatest and can show."

This, what we describe the intrinsic nature of mathematics, if, accepted gladly and single pointedly can change the complexion of terrestrial and celestial affairs pushing for more inventions and discoveries, encouraging the civilization to inch closer in understanding and deciphering the noble activities of the universe.

Without mathematics the world is null and void – ' a lifeless vacuum'. The world survives, sustain and progress only because of the subject in discussion. Without mathematics life is in imaginable and nature's mystics impregnable. Mathematics from yore has been propagated as a difficult subject to understand and digest but this does not fit as conceived. It only becomes daunting if you drift from the subject. Learners become susceptible under its pressure- reason being the peripheral view of the concept and pre-occupied notion of the subject being tough to handle. Therefore, to dilute the pressure, NEP (National Education Policy) has come up with more constructive and structured approach in understanding the subject with much ease.

We as facilitators needs to perceive mathematics as something natural with a focus to develop in learners mind the ability to particularize and generalize the concepts and theories supported by the logical thinking. The essence of approach is definitely going to transform the learners in developing an insatiable appetite for the subject creating deeper drills to unfold its perplexity.

Happy Reading...

Head of Mathematics Department
Sanjay Rai Saxena

PROUD MOMENT

Chinmaya Vidyalaya is a recipient of the "Happiness Award 2022-23" for exemplary leadership in promoting happiness, awarded by Society for Happiness.
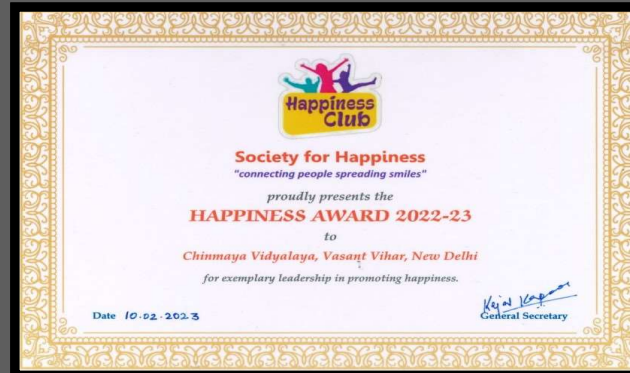
PROUD MOMENT

Sneha M of Class XI, Daksh Jamwal of Class IX and Dev of Class VIII were felicitatu by Swami Swaroopanandaji, for their achievements in Kalarippayattu, Shooting and Judo respectively.

Sneha M
Class XI

Daksh Jamwal
Class IX

Dev
Class VIII

PROUD MOMENT

The Future MUN Leaders Workshop is being conducted by the Harvard MUN team. It is a 2- weekend program that will help MUNners hone their skills such as leadership skills, public speaking, problem solving and so on. It is being held on the 25th, 26th of February and 4th and 5th of March 2023. The interview round was held on the 14th of February 2023.

A.J.R Anuraag Nambiyar of class XI A has been selected to attend the renowned Future MUN Leaders workshop by Harvard Model United Nations team(an initiative of Harvard intercollegiate MUN) at a global stage.

'Hu-man to Hanu-man'

Students of class IX and XI attended the youth talk by Swami Swaroopanandaji, Global Head (Chinmaya Mission) held at Delhi Chinmaya Mission, Lodhi Road.

# SWAMI SWAROOPANANDAJI VISITED THE SCHOOL FOR HANUMAN HAWAN.

On the occasion of Hanuman Hawan on 26th February 2023, Swami Swaroopanandaji and some special guests from Chinmaya Mission visited the school on Hanuman Hawan.

Workshop on SLD and ADHD in an inclusive classroom

A workshop was organized by Chinmaya Vidyalaya on 14th February 2022   The resource person was Ms. Radha R Gourisariya, Founder Director , Needs and Abilities, Resource person for CRE by RCI & NIEPMED. She explained the importance of Inclusion and different strategies to handle CWSN children with SLD and ADHD in an inclusive classroom. The explanation helped to pinpoint students' strengths and weakness. She added that the children going through challenges in these areas need be identified early and intervention should start, failing which children will face a lot of psychological challenges as they move on.
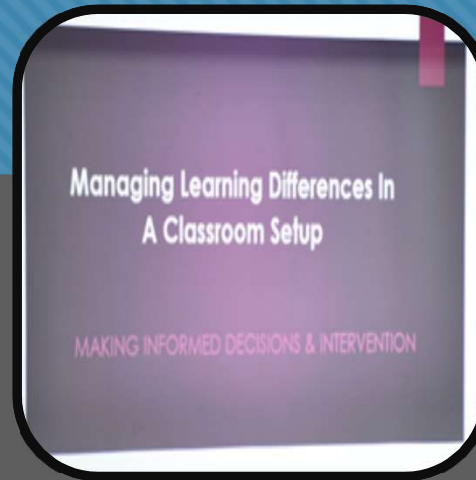
CLASS II PRESENTATION KALEIDOSCOPE

The students of Class II hosted their Class Presentation 'Kaleidoscope' on 23rd February 2023. The programme, an ode to the vibrant colours that bring happiness, hope, positivity and joy to our lives, was an enchanting amalgamation of heart-warming performances such as song, dance, drama, chanting and yoga.

Truly, colours speak louder than words and have the power to directly influence the soul. The effervescent performance of zealous children was a perfect representation of the colourful spirit of life.

CLASS III
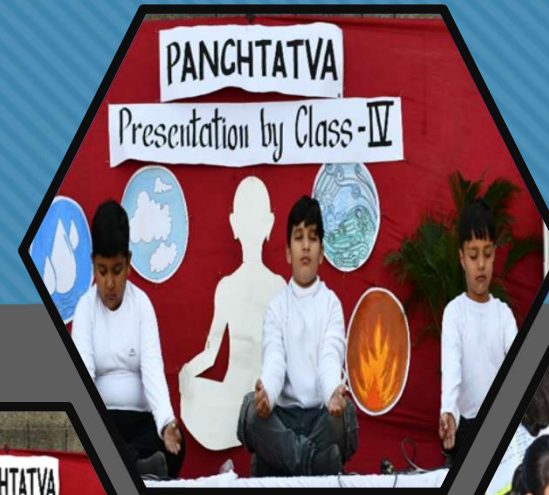# PRESENTATION
A JOURNEY THROUGH INDIA

The class III students showcased a presentation on 10th of February,2023 with great zeal and enthusiasm. The students took the audience to a journey through various Indian states by presenting their tableaus and dance performances. The Grand Finale brought all students together on one stage showcasing the Unity in Diversity which left the audience spellbound.

CLASS IV PRESENTATION PANCHTAVA

The class IV students presented a melange of thoughts, ideas and expressions by means of a stage presentation on 2nd February,2023.

A beautiful winter morning unfolded into an assortment of melodious songs, dance ,skit and poetry celebrating nature and its five elements. The highlight of the programme was the demonstration of the Yogic Five Mudras and the Ayurveda stall which provided deep insight on how to maintain balance of the Five elements in our body.

CLASS V PRESENTATION MANIKARNIKA

The class V students of Chinmaya Vidyalaya, New Delhi, showcased the inspiring journey of the Queen of Jhansi from Manu to Manikarnika by means of a stage presentation on 10th February 2023.

SPECIAL ASSEMBLIES

The Primary English Department conducted an assembly on the theme 'Learning English beyond Classrooms'.

The little learners of classes I and II danced on a medley of popular rhymes that help in language development in our early years. A student presented a powerful 'TED Talk' as Mrs. Sudha Murthy, a famous author. An interesting skit presenting a mash up of popular childhood fables enlivened the stage. A group of students presented the live reporting of an event by a news channel. The students could connect themselves with the sources outside their classrooms for their language development.

A special assembly was organized by the students of Class VIII on 3rd February 2023, to boost students' confidence before the commencement of the annual exam and to boost their confidence.
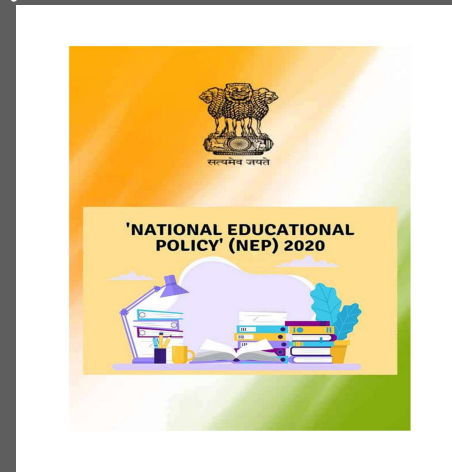
PRE-PRIMARY IN ACTION

SHOW AND TELL
COMMUNITY HELPERS

MAHASHIVRATRI
CELEBRATIONS

SPORTS DAY
CELEBRATIONS

NEP- "a continuum of special educational needs"

"Like the crest of a peacock, like a gem on the head of a snake, so is mathematics at the head of all knowledge."
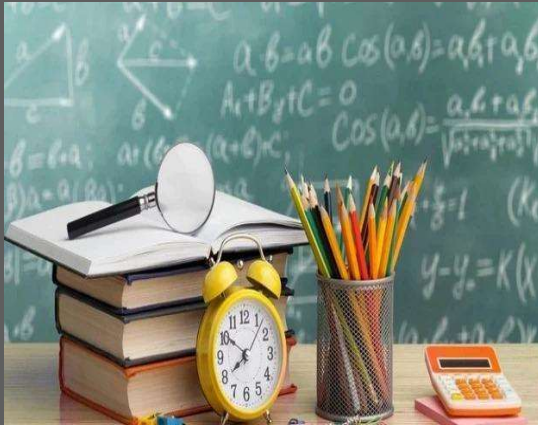
The need for innovation in teaching methodologies is required to build strong concepts of mathematics in young minds. The time has come where a student does not want old ways of teaching mathematics, it should challenge them to explore new concepts, make project based learning an essential part of teaching mathematics where a student gets thrust to learn and engage himself to enter into the realm of mathematics with joy of learning.

Research based learning plays a very crucial role in exploring a new side of mathematics which not only makes a child yearn to go deeper into the subject but also helps the child to build a greater foundation towards the subject.

The new National Education Policy (NEP), 2020, has significant provision and provides a platform to build, nurture, foster, encourage and multiply mathematical thinking. It has introduced the reforms needed to balance the need for 21st century employment and entrepreneurship, which is marked by critical, lateral and mathematical thinking. The NEP appreciated the necessity of Mathematical thinking and its importance for the country to become a vishwaguru. Big data analytics, artificial intelligence, machine learning, blockchains are key technologies of today, and mathematics is the core of all of these technologies. Hence, it is critical to building the computation thinking capabilities of our youngsters. The NEP provides the necessary nourishment by making Mathematics enjoyable and engaging using innovative methods from the foundational step itself. It is also mandated in NEP to introduce a coding curriculum from middle school as it helps in developing the computation capabilities and intuitive reasoning.

Because the applications of Mathematics are extensive and diverse, by introducing the multidisciplinary curriculum and credit-based mechanism, NEP provides flexibility to students to apply their knowledge. These reforms will be of particular importance to the student inclining Mathematics. Also, policy provisions for establishing Mathematics clubs in Higher Education Institutions for better collaboration and interdisciplinary research.

Innovation is the future of the country. The more we as facilitators give in, the brighter future we will create. Students are like buds, we give water in the form of knowledge and they will give us fruits as a result which is only possible with small steps towards greater learning. Let's all create a potential environment and impressive erudition keeping in mind the needs of today's youth as Youth is stronger and brighter!!

PRIYANKA NEGI
TGT MATHEMATICS

STUDENTS' CORNER

"Math is a journey, and not a destination."

  Without mathematics, there is nothing we can do. Everything around us is mathematics. Everything around us is numbers.

Math is a very interesting subject. It was introduced to the whole world by Indians. We learned math when the western world don't know how to write! Math is a very fun subject. Do you know if you have your Math test the next day you can just revise through the concepts one time and then finish! You just need to make math your favorite subject! And do you know what is the most important and easy subject. It is math! Many years ago math was the one and only subject taught! After many years we got other subjects too, so make math your favorite subject. Surely you will have fun.

"Mathematics is the language with which God has written the universe."

By Aniket Mishra V

Mathematics is Fun!!

Do you consider Mathematics to be a subject just to pass examinations, having no FUN? Well, think again!

I find maths so much fun. I think solving maths problem is like a video game. We can solve it for a long time without getting bored and when we complete our exercise, we reach to next level that makes us more excited. We try to do more and more problems as we like we do in exciting video game.

Sometimes I feel, Math is almost magical in some ways. You can start with limited information, but through the magic known as mathematics, you can change related information into completely different information. This is like having a wish granted by a genie to increase your knowledge, except you do it through your own work. Maths allows us and improves the problem-solving skills. It challenges themind. It has the power to solve real life problems. I really like this subject because it is about understanding concepts and then applying your brain to crack the toughest questions from the simple ones. And of course, We don't need to mug up things like we do in EVS and Hindi Literature.

So, Friends, next time when you attend the maths class, don't forget to have fun while playing with numbers and solving exciting word problems.

Shivansh Sehrawat

V

MATHS IN THE FORMATION OF COMPLEX STRUCTURES

What ideas flash across one's mind when you think about mathematics addition, subtraction, simple, compound interest, or some other mathematical terms? But maths is not only limited to solving questions or applying formulas. It is much beyond that. It is present in every aspect of our life. One such facet I am going to share with you all. Have you seen monuments like the Taj Mahal, Red Fort, and Meenakshi Temple? I am sure you must have. They all are also based on the application of Maths. They use the golden ratio. Here is the golden ratio explained in detail. Golden ratio, also known as the golden section, golden mean, or divine proportion, in mathematics, is the irrational number $(1+\sqrt{5})/2$, often denoted by the Greek letter ϕ or τ, which is approximately equal to 1.618. It is the ratio of a line segment cut into two pieces of different lengths such that the ratio of the whole segment to that of the longer segment is equal to the ratio of the longer segment to the shorter segment. Below is a picture attached explaining the golden ratio.

So I hope you saw maths is not about solving some sums or equations but about its usage in our daily life. So you also try to implement them in your life. Who knows that you might become the next Ramanujan.
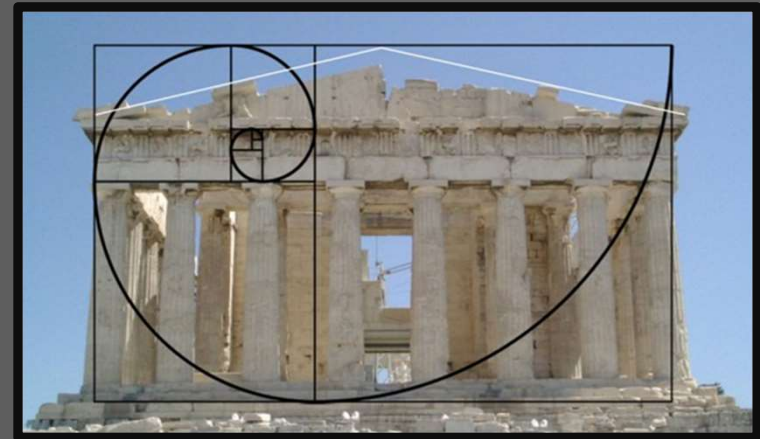
Kadambari Chaudhary
Class VIII

THE BIGGEST NUMBER

Well, what's the biggest number you can think of? A googol? A googolplex? A googolplexplex? A googol to the power googol? No, in reality, it is 40. Made with strategically planted trees in Russia. It is larger than the battalion markers in Calgary and the mile of pi. But it is the biggest in terms of surface area. In terms of value, which we generally refer to, there are bigger numbers than 40. Then, who is the biggest? 41? 42? 43? a billion? a quadrillion? No matter what number you can think of, there is always a larger number than that. We can go higher, and higher. There is no biggest last number. Except, infinity? As we assume it to be, Infinity is something, which is never-ending, or unreachable. But no, infinity is not a number. It is a 'kind' of number. In fact, some infinities are bigger than others. We all know what cardinals are. In simple language, these are the numbers we count with. For example, 20 apples, 8 dots, 5 letters, etc. To match the cardinality means to match the numbers. For example, we can match the cardinality of 4 apples and 4 oranges by putting them together one-on-one. To move ahead, we need to understand supertasks. Consider you have an apple, you cut it in half and eat one half in a minute. Now, you cut the left half into half and eat one quarter in half a minute. Then, you would cut the left quarter into half and eat the half-quarter in a quarter of a minute and so on. You would have to repeat the process an infinite number of times but you would still finish eating the apple in 2 minutes. This, as you might guess, is a supertask.

THE BIGGEST NUMBER cont.

Now, imagine a sheet of paper and draw a line on it. Then at the midpoint of the distance remaining, draw another line and so on. Here, you can fit as many lines as many numbers as there are. This set is what we call, aleph-null ($\aleph_0$). It is the first letter of the Hebrew alphabet and is the smallest infinity. It is, as many natural numbers there are, as many whole numbers there are, as many odd numbers there are, as many even numbers there are and even as many rational numbers there are. It might sound a bit weird, but it is, true. But what if I draw a line below all those lines, is this then $\aleph_0 + 1$?

The answer is, no, it is not. Infinities are not like naturals, if we match one-to-one, we can label that line as 0 and then count forward. Clearly, the amount of lines has not changed. I can add another line, label it as 1 and count forward. Add another line, label it as 2 and count forward. I can even add an $\aleph_0$ number of lines, and still not change the quantity. Each line can become an even number in the first pair and an odd in the other one. There is still a line for every number.

THE BIGGEST NUMBER cont.

Now let's go back to when I drew a single line below the set and instead of matching one-to-one, I want to label them in the order that I drew them in, from left to right. Then, we would require to start with 0 on the first line of the first set. But then what's that line which is below the first set? In the realm of infinities, labelling things in order is different than counting them. That line is not in the total but to label it, I would require a new set of labels, which goes past the real numbers. These are what we call ordinal numbers and the first trans-finite ordinal is, omega (ω). The lowercase Greek letter, omega. This means after counting an infinite number of numbers, comes ω. After ω, comes $\omega + 1$, $\omega + 2$, $\omega + 3$ and all other ordinal numbers, labelling things in order. Ordinals are not how many things there are, instead they tell the order in which the things are arranged. No matter how big an arrangement becomes, unless and until it is well ordered, as long as every part of it contains a beginning element, the whole thing describes a new ordinal number, always. But to note, $\omega + 1$ is not bigger than ω, it just comes after ω. $\aleph_0$ isn't the end. We can go further with the power sets of $\aleph_0$. Power sets are the number of different subsets we can make from a set of numbers. For example, the power set of 1 and 2 is {nothing}, {1}, {2} and {1, 2}. The number of subsets we can make from a set of numbers is 2 to the power of the number of numbers there are in the set. There are more ordinals than $\aleph_0$, let's try to reach them.

THE BIGGEST NUMBER cont.

Remember that numbers from ω are not cardinals, they do not refer to greater amounts, but instead, they represent the order. After the ω set, comes $\omega + \omega$, or $\omega \bullet 2$, then comes $\omega \bullet 3$, $\omega \bullet 4$, $\omega \bullet 5$ and then we reach $\omega \bullet \omega$, or ω^2. Eventually, we will reach $((\omega^\omega)^\omega)^\omega)^\omega \ldots$ and we run out of standard mathematical notation. But no problem, this is called epsilon-nought (ε_0). Continuing further we reach an infinite of infinities. But there's still something after that. This is what we call, omega-one (ω_1). In definition, ω_1 comes after all the ordinals in $\aleph_0$ and the cardinal which is used to label the arrangement within it is called aleph-one ($\aleph_1$). And let's continue further. Here we reach omega-omega (ω_ω). With the cardinality of aleph-omega ($\aleph_\omega$). Even after going further and further, there will still be a number which cannot be reached by any power set. A number like this is called an inaccessible cardinal. But interestingly, we have calculated with such a number. This is, alpeh-null ($\aleph_0$). We can't reach this number from below either. All numbers less than it are finite and anything we do with them returns a finite amount itself. It might be really big, but it's still a finite, far away from $\aleph_0$. But some others say that to be inaccessible, it has to be unreachable too, but we've reached $\aleph_0$. Mathematicians are still thinking about this.

Fun Fact: Arithmetic in cardinals is not as same in ordinals, in cardinals, 1+2 = 2+1, but in ordinals, $1 + \omega \neq \omega + 1$, but is still equal to ω.

Arav Saini

VIII

Uses of Math in our day to day life

Have you ever wondered where we use math in our daily life?
You will be amazed to hear the answer – we use math everywhere!
From judging distance to travel to making large transaction, math is everywhere.
Multiplication, addition, division and subtraction the fundamental operations are used when you to restaurant and order your favorite food and pay the bill, or go to mall and buy clothes or other accessories.
 It is also used to maintain health like measure a weight, number of calories, heart beat rate, blood pressure etc.
Without math how can we find Numbers of years, months, days, time etc.
Information on math helps us make better choices throughout everyday life, which makes our life simpler.
Wherever you go, whatever you do, we are using math daily without even realizing it. It just comes naturally.
Math is universal language in that it is language understood in all countries……
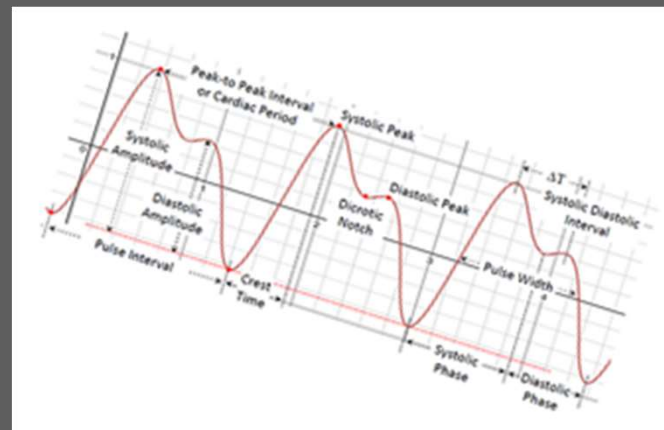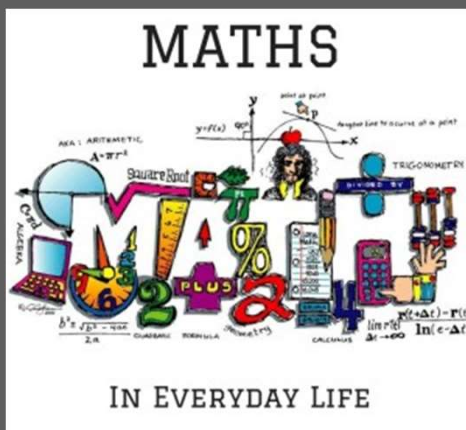
Vaarin Verma
V

MATH AND DANCE ARTICLE

By: Ryan Rodrigues, 7C

- Dance uses algebra patterning, group formations, tessellations, repetition, sequences and variations. Dance uses numeracy and the counting of beats, accents, syncopated time patterns, and other rhythm and time structures. Dance uses mapping, the clock, compass, and other shapes and spatial formations.

- Without Geometry, dancers would not be able to be synchronized and create shapes. Besides Geometry, everything in dancing has to do with patterns. Dancers memorize patterns in the steps in their dances. The rhythm in music usually consist of patterns in the form of beats.

MATH DANGE

The Math Behind Dance

Angle
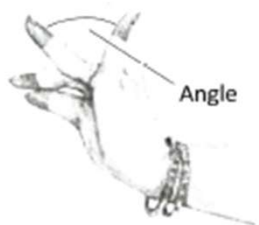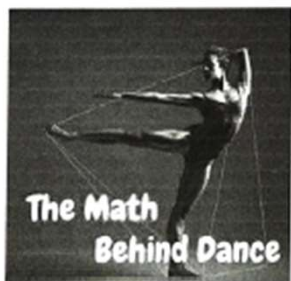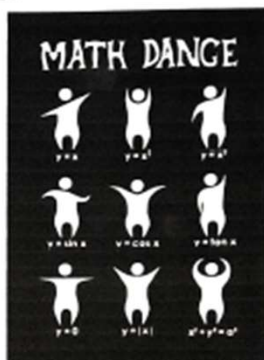
MY MATH VIEW

Math Is Like Time,
It Never Stops.

Math Is A Book,
You Can't Close It Till It's Done.

Math Is A Painting,
You Can't Lose Interest In It.

Math Is A Smile,
It Can Be Happy Or Evil .

Math Is Like Glue,
Once You Know It,you Can't Forget It .

Math Is A Bag,
It Can Hold Your Skills.

Math Is A Mother,
It's Always There When You Need It.

Math Is Like A Rollercoaster,
It's Exciting.

Navya Mehra IX

Numbers On The Page,
So Crisp And So Precise,
Adding, Subtracting, Multiplying,
A Never-ending Slice.

Geometry's Shapes And Lines, Trigonometry's Sine
And Cosine, Calculus' Limits And Derivatives,
All Make The Math World Combine.

Algebra's Equations And x's,
Statistics' Mean And Mode,
Math Is A Subject That Never Ends,
And Leaves Us With So Much To Decode.

But Amidst The Challenge And The Problems.
We Learn And We Grow,
Math Is The Language Of The Universe That Helps
Us Understand Its Flow

Utkarsh Bharti IX

MY NUMBER WORLD

Math O Math! My Beautiful World Of Numbers…

You Make Us Divide, Add, Subtract All Numerical Problems.

But One Number Here And There, Creates A Situation

Math Is Fun When We Get A Solution!

We Handle Math On Daily Basis With Brother, Mother And Father.

Mom Sees The Total Of Candies, But To Me It's The Balance Thereafter.

Cake Seems To Be Round, But I Only Want To Eat The $3/4^{th}$ Of The Round.

Clock Says Tick Tick Tick, It Makes Me Calculate At Every Single Click.

My Father Drives At Ferrari Speed,

Which Makes Me Calculate Time, Distance And Speed!

I Eat Pizza Will All The Satisfaction,

But Math Makes Me Understand The Laws Of Fraction.

Bingo Mad Angles Reminds Me Of Angles,

But Some See It Only As A Triangle!

When I Add And Add, I Always Go Mad.

Solving These Numbers Always Makes Me Glad.

Let's Be Friends With The Magic Of Numbers,

Whole Numbers, Natural Numbers Are Beautiful Family Members.

Integers Are Simple To Understand But When They Go Beyond '0',

Why Do They Act Like A Hero,

They Play Between '+' & '-', But At Times They Give Me Sinus!

Math Makes My Head Bang On The Wall,

But Once Understood Well It Makes Me Stand Tall.

Math Math Math You Are Engaging Till The Bone

How Will I Survive If Math Concepts Are Not Practiced At Home!

By: Manvik Sethi

VII

MATH'S BEAUTY

Math's Beauty Never Ever Scared Me,

It Is Like A Deep Knowledge Sea.

My Teacher Declared,

Maths Is Everywhere.

Equation Are Like Poet's Poem,

They Have Deep Meanings Which We Have To Find On Our Own.

 I Find It Kinda Magical,

That Glitters Of Numbers Make The Polynomial

Algebra Is The Best Part Of It,

It Has Variables, Constant And Mathematical Operations

Those Together Form Expressions.

Geometry Deals With Shapes, Angles, Dimensions And Size,

It's Daily Life Example Make Me Feel Nice.

I Always Do Mess In Integers,

Get Circle On Answers With Red Ink Colour.

When Pizza Arrives We Always Fight

By Using Fraction We Sort It Right.

Addition And Subtraction Are Both Basic Operations

Both Are Interesting Topics In Calculation.

Multiplication Is Repeated Addition,

And When We Inverse Multiplication We Discover Division.

Mathematics Is Like A Rainbow ﾟ ,

It Has No End.

<div align="right">

Saanvi Chandna

VII

</div>

MATH-O-RAP

Fractions, Fractions, They Are Part Of The Whole! Halves Are Halves, Big Or Small, They Both Join To Make 1 Whole!

Half A Pie Or Half A Tree, Different Things Different Size You See!

Fractions, Fractions, They Are Part Of The Whole!

Fractions, Fractions, They Are Parts Of The Whole! Quarter Is A Quarter, Big Or Small! 4 Quarters To Make 1 Whole! To Each No. In A Fraction Has, A Name Or Has A Name!

Numerator Up, Denominator Down, N Over D, Never Let It Down. Fraction, Fraction, They Are Parts Of The Whole! We Learn A New Skill, On The Whole. Like And Unlike Are Apart, But Fractions Are 2 Parts.

When Adding And Subtracting, Fraction We Find A Common, What? Denominator, To Get Some Action. Then, We Work With The Numerator. Simplifying Is The Final Step, Every, Time You See! Dividing Fractions Is Easy, As We Flip The 2nd And Multiply! Be Sure Your Next Step Is, To Simplify And Then You Are Done!

Oh- My-god, Oh- My- God, We Have Done It. Let's Move And Enjoy The Lesson. Until Then, It's Good Bye, Till, The Next Session.

Samarth Rajeshwar

IV

MATHS: A PHILOSOPHICAL PERSPECTIVE

Shapes Are Different For Every Little Hand Drawing Them,

Every Grown-up Holding Them.

Sometimes They Miss A Point,

Only Later To Remember And Disappoint,

In Finding It Too Late To Mend,

That Broken Shape.

Numbers Are The Same Every Time You See Them,

A Constant In Problems And Mazes Of Wits.

With One Careless Mistake,

It Changes, Never To Be Fixed Again,

Those Misunderstood Numbers.

Variables Change Every Time You Try To Simplify Them.

Yet They Never Change Their Appearance,

Staying The Same Throughout.

Until That Moment,

Reaching The Last Step,

They Just Become Additional Numbers,

That Might Be The Right Or Wrong Solution,

Later Confirmed With Substitution.
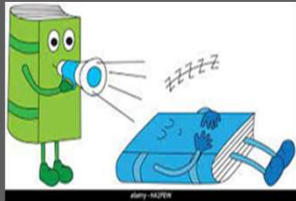

Shapes Of The Past,

Numbers Of The Present,

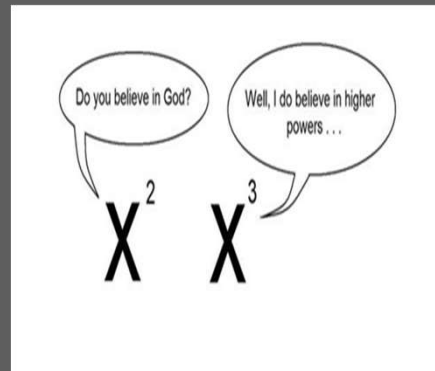Variables Of The Future.

Aadhya Goyal

VIII

LETS LAUGH

Math book says to the other book don't disturb me I have my own problems

Obtuse angle and acute angle are always sad because they are never right

WHY WAS 6 AFRAID OF 7?
- BECAUSE 7 8 9!

BUT WHY DID 7 EAT 9?
- TO GET 3^2 MEALS A DAY!

Do you believe in God?

Well, I do believe in higher powers . . .

X^2 X^3

Math teacher uses tractor called protractor

Maths teachers favourite tree is Geome-tree

Do you see that circle over there? He's really smart. He has 360 degrees!

360

Maths is fun

1. Why did a student wear glasses in maths class?
Ans. To improve di-vision

2. Do you know what seems odd?
Ans. Numbers that are not divisible by 2

3. What do you call a group of friends who love maths?
Ans. Alge-bros

4. How can you make time fly?
Ans. Throw a clock out of an aeroplane

5. What did one maths book tell to another?
Ans. Don't bother me I've got problems of my own.

MATH O ART

Art - integrated education was firmly embedded in the classroom transactions not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian Art and Culture in the teaching and learning process at every level. Art Integrated approach will eventually strengthen the linkages between Education and Culture in the long run.
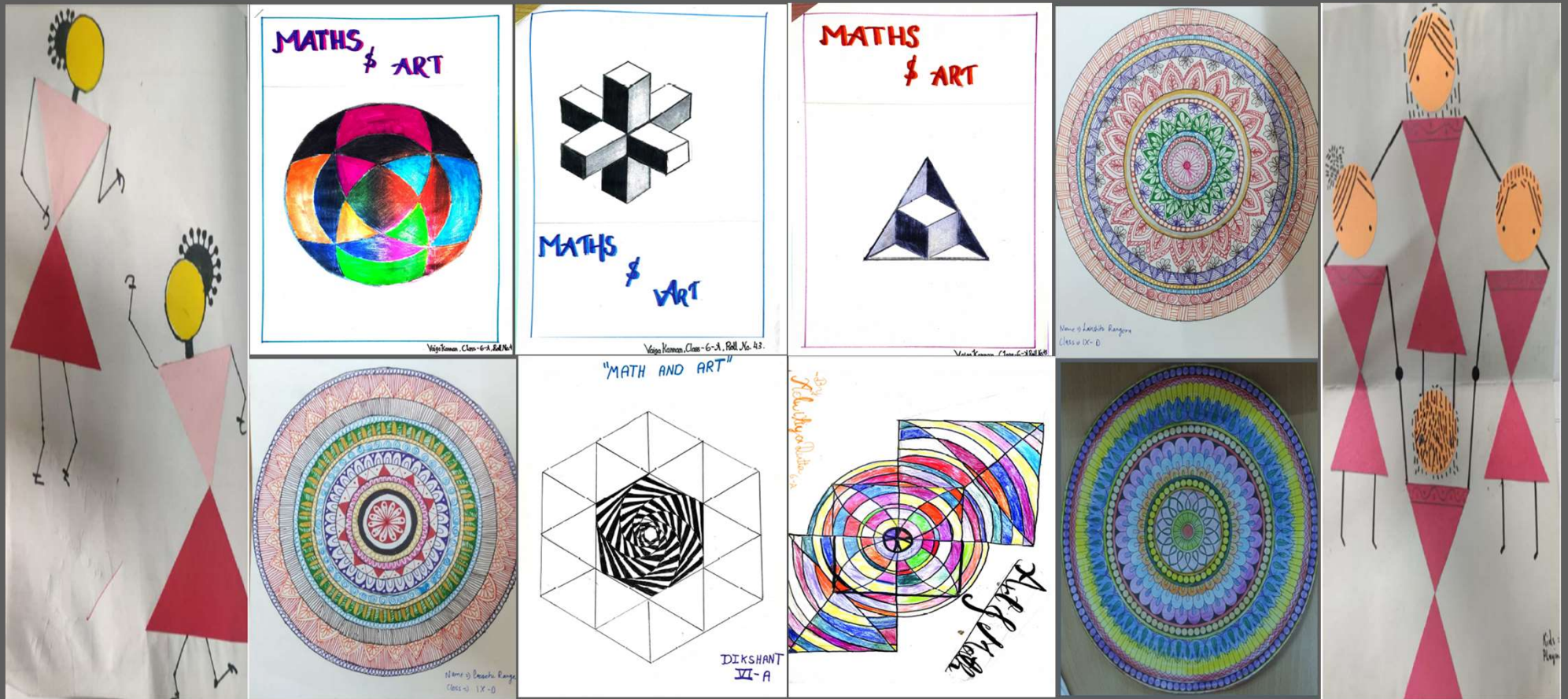
MATH O ART
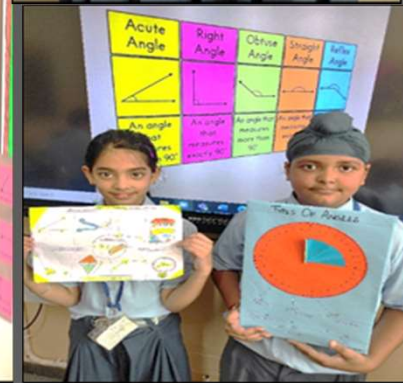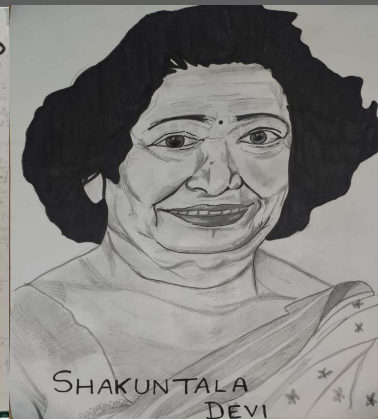
MATHEMATICAL GAMES

MATHEMATICAL RIDDLES

1. A grandfather, two fathers and two son went for a movie. They bought tickets for each. How many tickets they bought?

2. Suppose 1+9+8=1, then what can be 2+8+9?

3. Bella's twin lives at the reverse of her house number. Her house number is 16 .The difference between there house numbers ends in 5. What are the lowest possible numbers of our house numbers?

4. I am an odd number; take away an alphabet, and I become even. What number am I?

5. If days on Mars are as long as two weeks on Earth, how long is an hour?

6. Wednesday Addams is climbing up a mountain which is inclined. She has to travel 100 km to reach the top of the mountain. Every day she climbs up 2 km forward in the day time. Exhausted, she then takes rest there at night time. At night, while she is asleep, she slips down 1 km backwards because the mountain is inclined. Then how many days does it take her to reach the mountain top?

7. Which Number always increases and never decreases?

8. What will be the result when we will multiply all the digits?

SAANVI CHANDNA

7 A

THE MATH WORD SEARCH

P	O	I	N	T	D	A	T	A	T
I	Y	Z	E	I	B	R	I	O	S
E	C	T	L	R	O	T	O	X	E
U	S	C	H	P	A	R	G	H	L
L	U	R	A	A	S	U	Z	B	C
E	M	A	L	N	G	I	Q	J	R
R	Q	T	F	J	O	O	X	S	I
D	I	V	I	D	E	B	R	A	C
F	I	N	I	T	E	J	I	A	S
D	I	A	M	E	T	E	R	F	S

By A.J.R. ANURAAG
NAMBIYAR - XI

Math's MC2

1. How many times the digit, 2 be written if you wrote down all whole numbers from 1 to 100?

   a) 10
   b) 11
   c) 19
   d) 20

2. ----------- tens make a crore?

   a) 100,000
   b) 10,000,000
   c) 1,000
   d) 1,000,000

3. XXIX+XLII= ---------------------

   a) 71
   b) 61
   c) 51

4. Which one following is an even product?

   a) 44 × 2
   b) 5 × 77
   c) 3 × 101
   d) 9 × 55

5. Using only addition, how do you add eight 8s and get the number thousand?

6. If 4 part is shaded from 16 parts in a circle so, what will be the fraction of the shaded part?

   a) 4/16
   b) 16/4

7. Which of the following does not divide 3630?
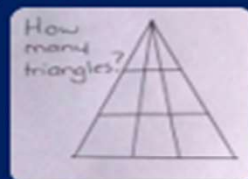
   a) 9
   b) 11
   c) 51

8. If 1=3

   2=3

   3=5

   4=4

   5=4

   Then 6=?

9. 9-3/1+1-2=?

   How many triangles?

10.

SUBHAJEET V B

PARENTS' CORNER

A Brief History of Time Measurement

Ever since humans first noticed the regular movement of the sun and the stars, they wondered about the passage of time. Prehistoric people first recorded the phases of the moon some 30,000 years ago.

1 day = 24 hours

There are various theories about how the 24 hour day developed. The fact that the day was divided into 12 hours might be because both the babylonian and egyptian civilisations recognised a zodiac cycle of 12 constellations.

In classical Greek and roman times, they used twelve hours from sunrise to sunset; but since summer days and winter nights are longer than winter days and summer nights, the lengths of the hours varied throughout the year.

In ancient India 60 ghati was used to measure the time from sunrise to sunset, each ghati consisting of 60 vighati.

A Brief History of Time Measurement cont.

Hours did not have a fixed length until the greeks decided they needed such a system for theoretical calculations. Hipparchus proposed dividing the day equally into 24 hours which came to be known as equinoctial hours. They are based on 12 hours of daylight and 12 hours of darkness on the days of the equinoxes. However, ordinary people continued to use seasonally varying hours for a long time. Only with the advent of mechanical clocks in europe in the 14th century, did the system we use today become commonly accepted.

Measuring Time

As the sun moves across the sky, shadows change in direction and length, so a simple sundial can measure the length of a day.

'Sun time' and 'clock time' are different.

Sun time is based on the fact that the sun reaches its highest point (the meridian), in the middle of the day, and on the next day at its highest point, it will have completed a full cycle. However, the time between the sun reaching successive meridians is often different from clock time.

A Brief History of Time Measurement cont.

According to <u>clock time</u>, from May to August, the day is close to 24 hours, but in late October the days are about 15 minutes shorter, while in mid February the days are about 14 minutes longer. For our daily routines, it is important to have a constant 'clock time' of 24 hours. This variation is called the 'Equation of Time' and shows the relationship between sun time and clock time. The variation has two causes; the plane of the Earth's equator is inclined to the Earth's orbit around the Sun, and the orbit of the Earth around the sun is an ellipse and not a circle.

<u>Inventions for measuring and regulating time</u>

The early inventions were made to divide the day or the night into different periods in order to regulate work or ritual, so the lengths of the time periods varied greatly from place to place and from one culture to another.

Oil Lamps

There is archaeological evidence of oil lamps about 4,000 BCE, and the Chinese were using oil for heating and lighting by 2,000 BCE. Oil lamps are still significant in religious practices, symbolic of the journey from darkness and ignorance to light and knowledge. The shape of the lamp gradually evolved into the typical pottery style shown. It was possible to devise a way of measuring the level in the oil reservoir to measure the passing of time

A Brief History of Time Measurement cont.

Candle Clocks

Marked candles were used for telling the time in China from the sixth century CE. There is a popular story that King Alfred the Great invented the candle clock, but we know they were in use in England from the tenth century CE. However, the rate of burning is subject to draughts, and the variable quality of the wax. Like oil lamps, candles were used to mark the passage of time from one event to another, rather than tell the time of day.

Earliest mechanical clock

Mechanical clocks replaced the old water clocks, and the first clock escapement mechanism appears to have been invented in 1275. The first drawing of an escapement was given by Jacopo di Dondi in 1364. In the early-to-mid-14th century, large mechanical clocks began to appear in the towers of several cities.

There is no evidence or record of the working models of these public clocks that were weight-driven. All had the same basic problem: the period of oscillation of the mechanism depended heavily on the driving force of the weights and the friction in the drive.

A Brief History of Time Measurement cont.

More Accurate Mechanical Clocks

Christiaan Huygens made the first pendulum clock, regulated by a mechanism with a "natural" period of oscillation in 1656. Galileo studied pendulum motion as early as 1582, but his design for a clock was not built before his death. Huygens' pendulum clock had an error of less than 1 minute a day, and his later refinements reduced his clock's errors to less than 10 seconds a day.

There was no device for keeping accurate time at sea until John Harrison, a carpenter and instrument maker, refined techniques for temperature compensation and found new ways of reducing friction. By 1761, he had built a marine chronometer with a spring and balance wheel escapement that kept very accurate time. With the final version of his chronometer, which looked like a large pocket watch, he achieved a means of determining longitude to within one-half a degree.

It was not until 1884 that a conference at Greenwich reached agreement on global time measurement and adopted Greenwich Mean Time as the international standard. Today we rely on atomic clocks for our most accurate time measurements.

By Pargya Tiwari
M/O Vallari Tiwari

Learning Maths- Offline Mode @Chinmaya Vidyalaya- A school with a Difference

Offline classes are traditional ways of teaching in which students can have face to face interaction with their teacher. There is active communication between students and teachers which allows for lively discussions and debates. It allows students to immediately address their doubts and receive quick feedback. The teachers can perform experiments and activities in front of the student, so students can easily observe and learn. It provides a stimulating environment which is a combination of both theoretical & practical aspects of learning. Offline classes contribute to the overall cognitive and skill development of the students, where students enjoy the company of peers along with the teacher, which is also important for student social development. In offline classes, students are more active physically and mentally.
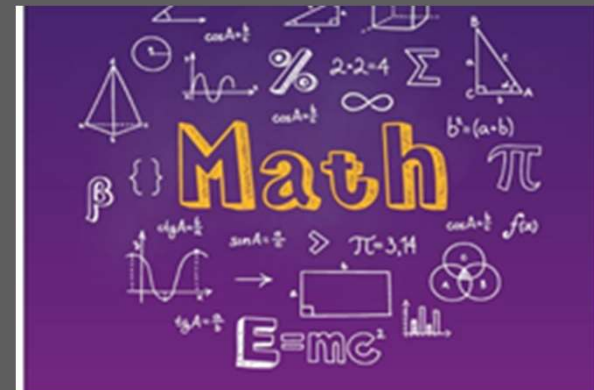
Here I would like to talk about the efforts made by the teacher and staff of the mathematics department to make learning Maths in a fun play way method. The methods and techniques used by the teachers make maths fun and interesting. The students look forward to such interactive sessions, which in turn help the child overcome the fear of the subject. The worksheets help the child with practice and understanding the concepts better. The fact that Maths can be interesting has been made by making the students involved in various activities and assemblies celebrating "International Mathematics Day" and National Mathematics Day". I would like to mention certain unique activities which made my kid start taking interest in mathematics…" A Card Activity" to understand the basic mathematical operations, "A Graph Making Activity" to understand the concept of data handling.

To sum up offline teaching is the way which helps students understand, enjoy, and learn the subject in the best way one can and Chinmaya Vidyalaya has always stood up to the expectations. We hope and look forward to more such interactive fun filled sessions for the students.

Rupamita Gupta

M/O Ekisha Gupta – V

MATHEMATICS

Mathematics is the most beautiful and most powerful creation of the human spirit.

'Stefan Banach'

According to Wikipedia, "Mathematics is the study of representing and reasoning about abstract objects (such as numbers, points, spaces, sets, structures, and games)". Math is all around us, in everything we do. It is the building block for everything in our daily lives. Mathematics is a subject that deals with numbers, shapes, logic, quantity and arrangements. Mathematics teaches to solve problems based on numerical calculations and find the solutions.

Mathematics makes our life orderly and prevents chaos. It has a number of very useful benefits to our mind if we go into its study. Few of the benefits that are nurtured by mathematics are power of reasoning, creativity, abstract or spatial thinking, critical thinking, problem-solving ability and even effective communication skills.

According to some people, math's is just the use of complicated formulas and calculations which won't be ever applied in real life. But, math's is the universal language that is applied in almost every aspect of life. Math is an interesting subject to learn or study! It's infinite like the Universe! So, there's a lot more to study and lot a more to research and learn!

By Deepika Bhargava
(Parent)

ANSWERS

Answers Mathematical Riddles

1. 3 Tickets as grandfather is father of the two sons who are fathers
2. 10 (Consider the first letter of the spelling of each digit, One+Nine+Eight= ONE, similarly Two+Eight+Nine= TEN)
3. The reverse of 16 is 61, to find difference between them we will subtract 16 from 61 which is 45.
4. It's SEVEN as when we remove S from it, it will become EVEN.
5. 14 Earth hours.
6. 99 days
7. Our age
8. 0, all digits are 0-9 and 0x1x2x3x4x5x6x7x8x9 = 0

SAANVI CHANDNA

7 A

THE MATH WORD SEARCH

1.AXIS
2.CHORD
3.CIRCLE
4.DATA
5.DIAMETER
6.DIVIDE
7.EUCLID
8.EULER
9.FIBONACCI

10. FINITE
11.GRAPH
12. HALF
13. PI
14. POINT
15. PYTHAGORAS
16. ROOT
17. SQUARE
18. SUM

MCQ-1

1. 20
2. 1,000,000
3. 71
4. 2 x 44 = 88
5. 888+88+8+8+8=1000
6. 4/16
7. 9
8. 3, because the word six has three letters.
9. 5
10. 12

ॐ पूर्णमदः पूर्णमिदं पूर्णात्पुर्णमुदच्यते
पूर्णस्य पूर्णमादाय पूर्णमेवावशिष्यते ॥

If we remove infinity from infinity what remains is still infinity

$$\infty - \infty = \infty$$