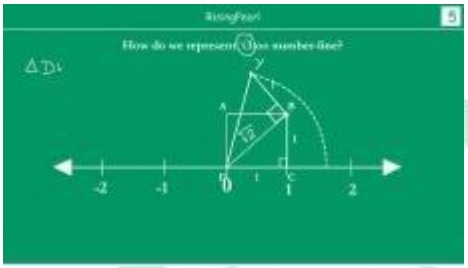
GRADE –IX MATHS

MONTH	ACTIVITY
APRIL-25 Date: 24/04/25	To construct a square-root spiral  Procedure: 1.Start with a point O: Mark a point on your paper, which will serve as the center of the spiral. 2. Draw a line OA: From point O, draw a line segment of unit length horizontally, labeled OA. 3. Draw a line AB: From point A, draw a perpendicular line segment of unit length, labeled AB. 4. Join OB: Connect points O and B. The length of line segment OB will be √2. 5. Repeat: From point B, draw a perpendicular line segment of unit length, and label the endpoint C. Join OC. The length of OC will be √3. 6. Continue: Repeat this process, creating a spiral where each new line segment is the hypotenuse of a right triangle with one leg of unit length and the previous hypotenuse as the other leg. 7. Each hypotenuse represents a square root: Each line segment in the spiral represents the square root of an integer (√1, √2, √3, √4, etc.).
JUNE-25 Date: 19/06/25	To represent some irrational numbers on the number line



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.Procedure:1. Start with a line segment:

Draw a line segment AB of length 'n' on the number line, where 'n' is the number inside the square root.

2. Construct a right triangle:

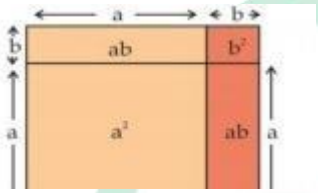
Extend AB to point C such that BC = 1 unit. This forms a right triangle ABC with a right angle at B.

3. Apply the Pythagorean theorem:

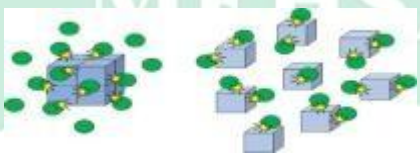
The length of AC (the hypotenuse) will be $\sqrt{n}$ ($AC^2 = AB^2 + BC^2$).

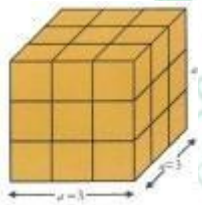
4. Transfer the length to the number line:

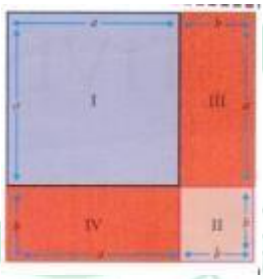
Use a compass to draw an arc with AC as the radius, starting at point A. The point where the arc intersects the number line represents $\sqrt{n}$.

JULY-25 Date: 10/07/25	To verify the algebraic identity : $(a + b)^2 = a^2 + 2ab + b^2$  Procedure:1.Draw a square: Start with a square where each side has a length of (a+b). 2. Break it down: Divide the square into four regions: A square with side 'a': This will have an area of a^2. A square with side 'b': This will have an area of b^2.
	Two rectangles: Each with sides 'a' and 'b'. These will each have an area of ab. 3. Calculate the total area: The total area of the large square is $(a+b)^2$. You can also calculate the total area by adding the areas of the smaller squares and rectangles: $a^2 + b^2 + ab + ab = a^2 + 2ab + b^2$. 4. Verify the identity: Since the large square's area is both $(a+b)^2$ and $a^2 + 2ab + b^2$, the identity $(a+b)^2 = a^2 + 2ab + b^2$ is verified.

AUGUST-25 Date: 07/08/25	To verify the algebraic identity : $(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$  *Procedure:* *1. Take a hardboard of suitable size and paste a white paper on it.From a coloured paper, cut out a square of side a units,* *2. Further, cut out a square of sided units (b < a)from another coloured paper,* *Also, cut out a square of sidec units (c<b)from different coloured paper.* *3. Cut out two rectangles of dimensions* *b x a from different coloured paper,* *Also, cut out two rectangles of dimensions c x b from different coloured paper.* *4. Now further, cut out two rectangles of dimensions c x a from another coloured paper.* *5. Paste the squares and rectangles on the hardboard..*

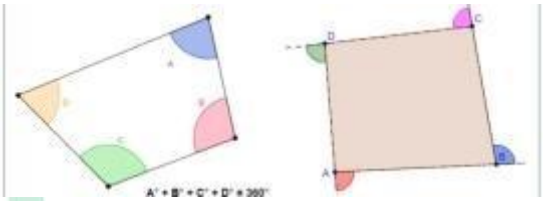
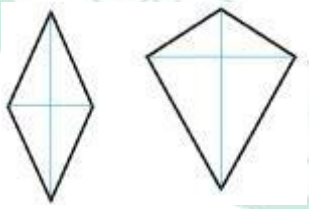
OCTOBER-25 Date: 09/10/25	Surface area of cylinder  Procedure: 1. Remove the top and bottom circles of the cylinder. 2. Make a vertical cut in the curved surface and lay the cylinder flat to get a rectangle as shown. 3. Measure the length and breadth of the rectangle so formed.
NOVEMBER -25 Date: 06/11/25	Sum of interior angles of a quadrilateral  ` Procedure: 1. Draw and Cut: Draw a quadrilateral on a sheet of paper and carefully cut it out. 2. Isolate Angles: Tear off each of the four corners (interior angles) of the quadrilateral. 3. Arrange and Observe: Arrange the four corner angles around a point, ensuring they touch each other without gaps or overlaps. 4. Verify: You should see that the four angles fit together to form a complete circle, which measures 360 degrees.
DECEMBER-25 Date: 11/12/25	Comparison of surface areas  Procedure: Step 1. Take 2 unit cubes and place them adjacent to each other without

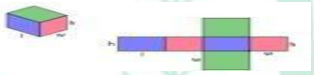
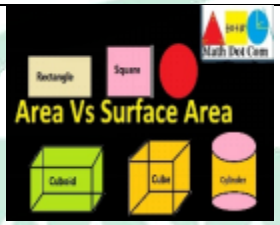
	2.Leaving any gap between their two faces. Step 2. Find the surface area of the solid shape so formed.
JANUARY-26 Date:08/01/26	To verify the algebraic identity $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$  Procedure: 1.Make a cube of side a units and another cube of side b units by using acrylic sheets and cello-tape/adhesive. 2.Make a cuboid of dimensions a x a x b using acrylic sheet and cello-tape/adhesive. 3.Make a cuboid of dimensions a x b x b using acrylic sheet and cello-tape/adhesive, 4.Arrange these cubes and cuboids. 5.On removing cuboids of dimensions a x a x b and a x b x b from the solid obtained, to get another solid.

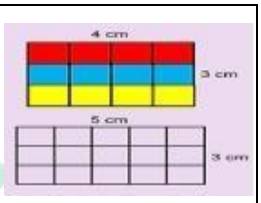
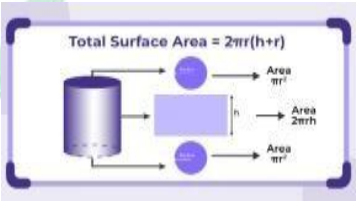
FEBRUARY- 26 Date: 12/02/26	To verify the algebraic identity :$a^3 + b^3 = (a + b)(a^2 – ab + b^2)$  Procedure: 1. Make a cube of side a units and another cube of side b units by using acrylic sheets and cello-tape/adhesive 2. Make a cuboid of dimensions a x a x b using acrylic sheet and cello-tape/adhesive, 3. Make a cuboid of dimensions a x b x b using acrylic sheet and cello-tape/adhesive,
	4. Arrange these cubes and cuboid. 5. On removing cuboids of dimensions a x a x b and a x b x b from the solid obtained,to get another solid.

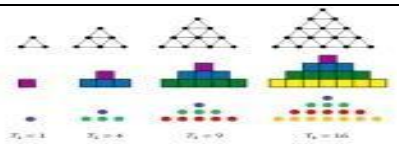
Grade:-VIII **Sub :- Maths**

MONTH	**ACTIVITY**
APRIL- 25 25/04/25	Properties of Rational Numbers  **Procedure**:1.The properties of rational numbers help us to distinguish them from the other types of numbers. Rational numbers consist of integers, whole numbers, and natural numbers. They can be represented in the form of a fraction p/q . The properties of rational numbers include the associative property, the commutative property, the distributive property, and the closure property. What are the Properties of Rational Numbers? 2.When numbers can be expressed in the form of p/q, then they are considered to be rational numbers, here both p and q are integers and $q \neq 0$. There are six properties of rational numbers, which are listed below: Closure Property ,Commutative Property,Associative PropertyDistributive Property, Multiplicative Property ,Additive PropertyLet us explore these properties on the four arithmetic operations (Addition, subtraction, multiplication, and division) in Mathematics.

JUNE-25 18/06/25	Sum of interior angles of a quadrilateral  **Procedure**: 1 Take a white chart paper and draw a quadrilateral .name the quadrilateral as ABCD. Now, divide the quadrilateral into four parts and colour them in four different colours. 2. Now draw arcs with same radii of angles of the quadrilateral. Name them as 1,2,3 and 4 . Using a pair of scissors ,cut these four angles out of the paper and separate them. 3 Paste the four angles 1,2,3 and 4 such that they coincide at a point P on a white sheet, one adjacent to the other. 4.all the four angle 1,2,3,and 4 make up a complete angle around the point P. The measure of a complete angle around the point P is 360 degree
JULY-25 09/07/25	Making a kite and rhombus  **Procedure**: 1 Take a white chart paper and draw a quadrilateral .name the quadrilateral as ABCD. Now, divide the quadrilateral into four parts and colour them in four different colours. 2. Now draw arcs with same radii of angles of the quadrilateral. Name them as 1,2,3 and 4 . Using a pair of scissors ,cut these four angles out of the paper and separate them.3 Paste the four angles 1,2,3 and 4 such that they coincide at a point P on a white sheet, one adjacent to the other. 4.all the four angle 1,2,3,and 4 make up a complete angle around the point P. The measure of a complete angle around the point P is 360 degree

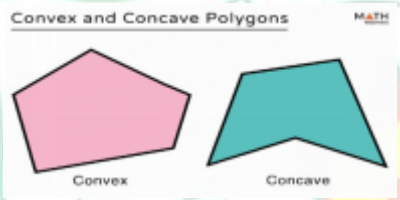
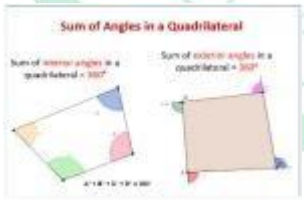
AUGUST-25 06/08/25	Making a Dice  **Procedure :** 1. Take a squared paper.2. Draw a net of a cube on the squared paper of same sizes (i.e 3 x 3) 3 .Now ,cut along the boundary of the net .4. Write the numbers 1,2,3,4,5 and 6 on it's faces in such a way that sum of the numbers on the opposite face is 7 .5. Fold this paper along dotted lines to make a cube.6. Paste this net with a cellotape to make a cube.7. Now throw this dice 20 times and note the number on the top face of dice after each throw
OCTOBER - 25 08/10/25	Surface area of a cuboid  **Procedure** 1. Take a squared paper. 2. Draw a net of a cube on the squared paper of same sizes (i.e 3 x 3) 3 .Now ,cut along the boundary of the net .4. Write the numbers 1,2,3,4,5 and 6 on it's faces in such a way that sum of the numbers on the opposite face is 7 .5. Fold this paper along dotted lines to make a cube.6. Paste this net with a cellotape to make a cube.7. Now throw this dice 20 times and note the number on the top face of dice after each throw
Nov-25 04/11/25	Comparison of surface  areas **Procedure :** 1. Take two units cubes and find their total surfaces areas. 2. Now, paste these two unit's cubes together with glue stick

DECEMBER-25 10/12/25	 Relationship between length perimeter and area of a square **Procedure :** 1 On a grid, draw four squares of 2cm,3cm,4cm and 5cm respectively 2. Find the perimeter of each square by counting the sides of grid squares enclosed there in write the answer inside the each square.3. Now on the grid, draw four squares of sides 2cm,3cm,4cm and 5cm respectively 4. Find the area of each square by counting the number of grid squares enclosed there in .Write the answer inside each square**.**
JANUARY-25 07/01/26	Surface area of cylinder  **Procedure** 1. Take a hollow right circular cylinder of height ‘h’ units and radius ‘r’ units 2. Cut this cylinder along PQ and spread the cylinder on a white sheet of paper .We will get a rectangle PQRS 3. It is clear that lateral surface area of the cylinder is same as the area of the rectangle

FEBRUARY-25 11/02/26	Number Patterns  **Procedure** 1. Take a violet colour chart paper and draw a square of side a=5cm on it .Now take a red color chart paper and draw a square of side b=2cm on it.2. Take the violet square and paste the red square on it. Now, using a pair of scissors cut the violet square from it.3. Now, cut off in such a way that we get two rectangular parts. 4. Now, paste the cut outs of the rectangles on a white chart paper.

SUBJECTUAL ACTIVITIES 2025-2026

Grade VII **Subject: Mathematics**

Month	Activity
APRIL - 25 **24/04/25**	**Convex and concave polygons**  Procedure :- Procedure for Determining Convexity/Concavity: * Measure Interior Angles: If any angle is greater than 180 degrees, the polygon is concave. * Draw Diagonals: If any diagonal extends outside the polygon, it's concave. * Visual Inspection: Observe if the shape has a "dented" or "cave-in" area, which indicates a concave polygon.
JUNE - 25 **19/06/25**	**Sum of interior angles of a quadrilateral**  **Procedure:** - The sum of the interior angles of a quadrilateral is 360 degrees. This can be derived by dividing the quadrilateral into two triangles and summing the angles of those triangles. The formula for the sum of interior angles of a polygon is (n-2) * 180 degrees, where n is the number of sides.

DELHI PUBLIC SCHOOL MEHSANA

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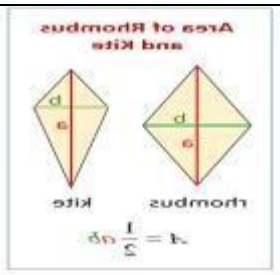
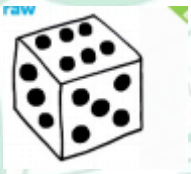
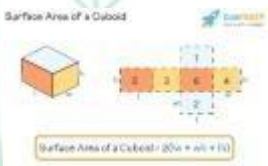
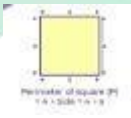
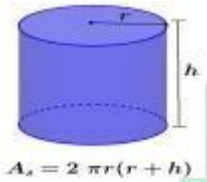
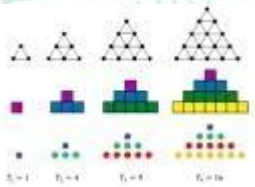
JULY - 25 **10/07/25**	 **Making a kite and rhombus** **Procedure:-**To construct a kite or a rhombus, you'll need a ruler, compass, and pencil. For a kite, you'll need to know the lengths of the diagonals or some side lengths and angles. For a rhombus, you'll need to know either one side length and one angle or the lengths of the diagonals.
AUGUST - 25 **07/08/25**	 **Making a Dice** **Procedure: -** To make a dice, you can either use a template or fold a paper dice, or you can create a dice from scratch using materials like wood or resin. For a paper dice, you'll need a template, scissors, and tape. For a wood dice, you'll need a saw, sanding paper, and a finishing oil. For a resin dice, you'll need a mold, resin, and other materials.
OCTOBER - 25 **09/10/25**	 Surface area of a cuboid **Procedure:** - To find the surface area of a cuboid, determine whether you need the total surface area (TSA) or the lateral surface area (LSA). The total surface area includes all six faces, while the lateral surface area excludes the top and bottom.
November - 25 **06/11/25**	 **Comparison of surface areas** **Procedure: -** To compare surface areas, you first need to understand what surface area is and how to calculate it for different 3D shapes. Then, you can compare the calculated surface areas to determine which object has a larger or smaller surface area**.**
DECEMBER - 25 **11/12/25**	**Relationship between length perimeter and area of a square**  **Procedure: -** The perimeter of a square is directly proportional to its side length, while its area increases quadratically with the side length. Specifically, the perimeter is four times the side length ($P = 4s$), and the area is the square of the side length ($A = s^2$).

JANUARY - 26 **08/01/26**	**Surface area of cylinder**  **Procedure: -** To find the surface area of a cylinder, you'll need to calculate the area of its curved surface and the two circular bases, then add them together. The total surface area (TSA) of a cylinder is given by the formula TSA = 2πr(r + h), where 'r' is the radius of the base and 'h' is the height of the cylinder.

FEBRUARY - 26 **12/02/26**	**Number Patterns**  **Procedure: -** To solve number pattern problems, you need to identify the rule or relationship between the numbers in the sequence. This can be done by looking at the difference between consecutive terms or by trying different mathematical operations like addition, subtraction, multiplication, or division. Once the rule is identified, you can apply it to predict the next number in the sequence**.**

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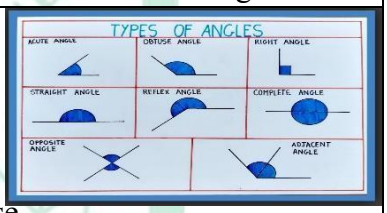
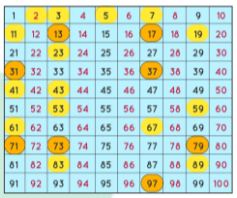
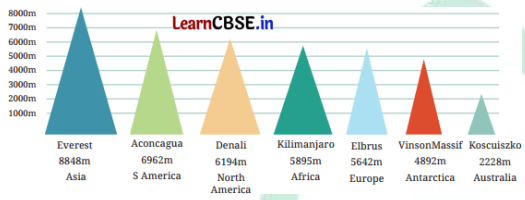
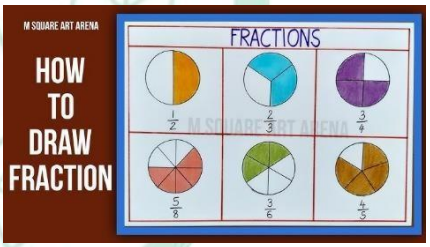
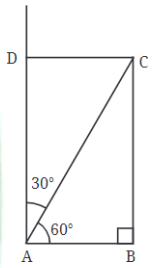
GRADE –VI **MATHS**

DATE	ACTIVITY
25/04/25	**Matchsticks Patterns**  **Material:** A4 size color paper, matchsticks, sketch pens. **Procedure:** Today we will learn patterns with the help of matchsticks. We create a continue pattern with matchsticks. Like that we will make 3 for 4 patterns with matchsticks look at the link and images and write the rule of the following.
18/06/25	**Different Angles**  **Material:** A4 size color paper, scale, sketch pens, protractor. **Procedure:** To draw a 30 angle, We begin with the base and draw a ray IN. We will place the centre point of the protractor on I and align IN to the 0 line. Now, starting fro 0, count your degrees up to 30 on the protractor. Mark point T at the label 30 angle. Using a ruler join the point I and T. **∠TIN =** 30o is the required angle.
09/07/25	**Divisibility Rules**  **Material:** A4 size color paper, scale, sketch pens. **Procedure:** Take a paper and note the rule of divisibility with example in A4 size paper using pens and learn it well.
06/08/25	**1 to 100 Prime And Composite Numbers**  **List Material:** A4 size color paper, scale, sketch pens. **Procedure:** Take a A4 size paper and make square grids on it and write 1 to 100 counting on it. Cross out 1 because it is neither prime nor composite number. Color yellow on 2 and then color blue on all multiples of 2. Then yellow on 3 and blue on all multiples of 3. Next yellow on 5 and blue o all multiples of 5, Continue this process till all the numbers in the list are either yellow or blue in color.

08/10/25	**Date handling – Tallest Mountain bar** graph  **Material:** A graph or square grid paper, scale, pencil, sketch pens. **Procedure:** The first step in drawing any graph is to collect data **(TB page no - 101 & 102).**

	• Draw the axis: In any graph, there are two axes. Draw the x-axis and the y-axis. • Label the x-axis. For example, we label the names of continent and tallest mountain. Next, label the y-axis. take the frequency and plot the points on the y- axis accordingly. • Finally, we draw the bars. In general, the bars are not connected or continuous. Now, extend the bars from the base value to their corresponding frequency. • We can find out the most and least preferred choices.
07/11/25	**Fraction – show different fraction in same circle**  **Materials:** Colored paper strips**,** Scissors**,** Markers or pens**,** Ruler **Procedure:** Give each student several strips of paper (all the same length). Ask them to fold the strips to represent different fractions, for example: Fold one strip into 2 equal parts (1/2) Fold another into 3 equal parts (1/3) Fold another into 4 equal parts (1/4), and so on. students cut along the folds to create fraction pieces.
10/12/25	**Tangram** **Materials:** • One set of Tangram pieces per student or group (7 pieces: 2 large triangles, 1 medium triangle, 2 small triangles, 1 square, 1 parallelogram) • Worksheets with different shape outlines (optional) • Plain paper and pencils (for drawing shapes) • Scissors and cardboard (if students make their own Tangram sets)  **Procedure:** Distribute Tangram sets to each student or group. Challenge students to create specific shapes such as animals, letters, or objects using all seven pieces. Provide worksheets with sample shapes for inspiration, or let students create

	their own figures. Encourage students to think about how shapes fit together and to experiment with rotations and flips.
07/01/26	**Construct a rectangle with one diagonals divides the opposite angles into 60^0 and 30^0** **Materials Required:** Compass**,** Protractor**,** Ruler/Scale, Pencil**,** Eraser, Paper **Procedure: Draw a rectangle ABCD:** Start by drawing a horizontal line segment AB of any length (for example, 8 cm). At point A, construct a perpendicular line to AB using the compass and ruler. Along this perpendicular, mark point D such that AD is any length (for example, 5 cm). Draw line segment BC parallel to AD and equal in length. Join CD to complete the rectangle ABCD. 
11/02/26	**Playing with tiles** **Materials:** Square tiles (e.g., 1 cm × 1 cm tiles or any small square tiles) — around 20 to 30 tiles per group**,** Grid paper, Ruler, Pencil and eraser **Procedure:** Give each student or group about 12-20 tiles. Ask them to arrange the tiles to form a rectangle or any closed shape without gaps or overlaps.