# Math Lab

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# PRODUCT CATALOGUE

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**Scholarsmerit Online Pvt. Ltd.** Maths lab for Classes 1 to 12.

https://scholarsmerit.com

#### What's Maths Lab..?

#### INDRODUCTION

Scholarsmerit math lab is designed to support students conduct experiments and increasing their curiosity. The lab experiments can be integrated with current curriculum. Given the requirement for schools to have a separate mathematics lab, Scholarsmerit offers around 200 items for schools to develop a state-of-the-art mathematics lab. The Scholarsmerit math lab is designed to help teachers, motivate children and help them understand the versatility of the subject. With lab, students can experience, observe and practice concepts of subjects easily and teachers can conduct lab sessions.

#### Advantage of Maths Lab:

#### Math laboratories can aid in the learning of the subject in the following ways:

- It allows students to understand and internalize basic mathematical concepts through concrete objects and situations.
- Students can use models and paper folding techniques to verify or discover several geometric properties and facts.
- Students gain interest and confidence in learning the subject.
- The laboratory provides an opportunity to demonstrate the relevance of mathematical concepts to everyday life.
- Become an independent learner and participate more actively in the learning process.
- Using the laboratory allows students to engage in more active thinking, discuss the material with their classmates, and assimilate the information better.
- It enables the teacher to demonstrate, explain, and reinforce abstract mathematical ideas through concrete objects, models, charts, graphs, and pictures.

#### About Math Lab

Scholarsmerit is a company that was established in 2020 under the expert guidance of Ex-Dean of the National Council of Educational Research and Training (NCERT) and other mathematicians. Our company was founded on the premise of improving students' ability to grasp, apply and retain concepts in their long-term memory.

#### **Our Business Partners**



#### Infrastructure & items for Math lab:

#### Maths LAB

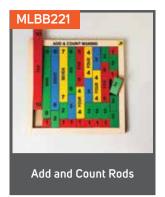
Scholarsmerit manufactures around 200 items for establishing a state-of-the art mathematical lab within schools. These items adhere to the suggested hands-on activities in mathematics for Class 1 to Class 12 as per document 'Mathematics Laboratory in schools – towards joyful learning' and 'Essential Standard Operating Procedure (SOP) Required for Affiliation' published by Central Board of Secondary Education (CBSE).

Scholarsmerit maths lab items are made of a variety of materials such as acrylic, wood, rubber, etc. maths professionals will provide orientation to teachers and students on how to use each item and also provide continued support.

No.	Code	Category	No.	Code	Category
1	MLBB221	Add and Count Rods	16	MLBG004	Magnetic Numbers with Tin plate
2	MLBG002	Arithmetic Chart Set of 7	17	MLBP013#	Mann cards (4 digits)
		1. Numbers & Number Names	18	MLBB245#	Measuring Tape (3 m)
		2. Addition	19	MLBG040	Measuring Tape (15 m)
		3. Subtraction	20	MLBB241#	Meter scale Steel
		<ol> <li>Multiplication table Up to 10</li> <li>Division</li> </ol>	21	MLBG043	Metric Wheel
		<ol> <li>Bivision</li> <li>6. Multiplication Table Up to 20</li> </ol>	22	MLBT077#	Multiplication of Fraction
		7. Roman Numerals	23	MLBT002#	Multiplication with Beads
3	MLBG001	Beads in String	24	MLBG003	Number Mat
4	MLBB203	Counting Abacus	25	MLBG019	Numerical Balance
5	MLBG007	Decimal Abacus	26	MLBB234	Set of Volumetric Cups
6	MLBP014#	Decimal Mann Cards	27	MLBB228	Shapes (Mould)
7	MLBB224	Flash Cards	28	MLBG040	Skip Counting
8	MLBG054	Game of Place Value	29	MLBP015	Stencil
9	MLBP	Games and Puzzles (Tangram,	30	MLBB205	Student Abacus
	007-010	Sudoku, Tambola, Integer board)	31	MLBT001	Subtraction with Beads
10	MLBG052	Geared Teacher Clock	32	MLBG020	Tessellation Kit
11	MLBB207	Geo Board Square	33	MLBB230	Time Teaching Stamps
12	MLBB225	Geometrical Shapes	34	MLBT003	Tower of Numbers
13	MLBB242#	Half Meter Scale	35	MLBP011	Unit Cubes
14	MLBG025	Jug & Beaker Set	36	MLBP017#	Wooden Scale (One Meter)
15	MLBB238	Kitchen Balance			

#### Primary Maths Lab



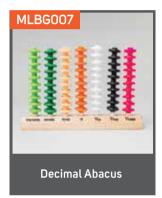




Arithmetic Chart Set of 7























Kitchen Balance



Magnetic Numbers with Tin plate



Measuring Tape



















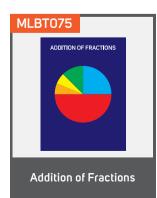


















# Upper Primary Maths Lab

No.	Code	Category	No.	Code	Category
1	MLBT075	Addition of Fractions	30	MLBG040	Measuring Tape (15 Meter)
2	MLBT013	Addition of Negative and Positive	31	MLBB241#	Meter Scale Steel
		Numbers	32	MLBT077	Multiplication of Fraction
3	MLBT049#	Associative Property	33	MLBT074#	Number Puzzle
4	MLBT046#	Closure Property	34	MLBT044	Percentage Kit
5	MLBT072	Circle Concept Kit	35	MLBP012#	Physical Balance
6	MLBB217	Circle Fraction Disk	36	MLBT056	Prime Numbers & Composite
7	MLBT047#	Commutative Property			Numbers
8	MLBB215	Cylinder Parts	37	MLBT008	Ratio and Percentage
9	MLBT037#	Decimal Numbers	38	MLBB280	Ratio of Area of Similar Triangles
10	MLBT048#	Distributive Property	39	MLBB234	Set of Volumetric Cups (Plastic)
11	MLBT007	Divisibility Rules	40	MLBG048	Standard Time indicator
12	MLBT078	Division of Fractions	41	MLBP015	Stencil
13	MLBT054	Easy Method to find HCF	42	MLBT076#	Subtraction of Fraction
14	MLBT053	Easy Method to find LCM	43	MLBG020	Tesellation Kit
15	MLBT055#	Easy Multiplication	44	MLBG049	Thermometer
16	MLBT004	Exponents and Powers	45	MLBG038	Upper Primary Chart Set of 15
17	MLBT080#	Fraction Concept Instruments			1. Number system
18	MLBB218	Fraction of Circle			<ol> <li>Algebra</li> <li>Rational Numbers (Properties,</li> </ol>
19	MLBB219	Fraction of Square			Addition and Subtraction)
20	MLBB220	Fraction of Triangle			<ol> <li>Rational Numbers (Properties, Multiplication and division)</li> </ol>
21	MLBT012#	Fraction Tiles			5. Different Lines and Points
22	MLBP	Games and Puzzles			6. Different types of Angles
	007-010	(Tangram, Sudoku, Tambola, Integer board)			<ol> <li>Pair of angles corresponding, linear and alternate</li> <li>Different Triangles</li> </ol>
23	MLBB207	Geo Board Square			8. Different Triangles, Pythagoras Theorem
24	MLBB211A	Geometrical Solids (Small)			9. Quadrilateral (Properties and Types)
25	MLBB210	Geometry Box			10. Circle: Basics
26	MLBG014	Geometry Kit			11. Congruent Triangles Theorems
27	MLBG018	Integer Number Line Bar			12. Properties of a Circle
28	MLBB284	Identity Set - 3			13. Mensuration 1 - Area, Perimeter 14. Mensuration 2 - Total Surface
		1. Angle Property of cyclic Quadrilateral			Area, Volume
		2. Angle Sum property of Quadrilateral			15. Profit & Loss
		<ol> <li>Angle Sum Property of Triangle</li> <li>Exterior Angle of Regular Polygon</li> </ol>	46	MLAB013#	Upper Primary Kit
29	MLBT011a	Linear Equations (One variable)	47	MLBP011	Unit cubes
29	MLBT011a	Linear Equations (One variable)			





# Does your school have limited space to set up a mathematics lab..?





#### What is included in our portable lab?



#### **Special features:**

- Perform over 200 experiments.
- Compactly designed to be installed in any classroom only require 5 sq. ft of space.
- Walk-through video available.
- Easy to implement and quick turnaround time.
- One-stop solution with a single source of
- procurement.

Portable lab can be taken to each classroom



## Secondary Maths Lab

No.	Code	Category	No.	Code	Category
1	MLBG011	Algebra Tiles Magnetic	22	MLBT006	Inverse Proportion
2	MLBT079	Area of Circle	23	MLBT010#	Irrational Numbers on a Number Line
3	MLBT015	Arithmetic Mean	24	MLBT030	Magic Hexagon
4	MLBT018#	Bar Graph	25	MLBB272	Magnetic Graph Coordinate Board
5	MLBT051	Basic Proportionality Theorem	26	MLBT016#	Median
6	MLBT041	Centroid of a Triangle	27	MLBB285	Mensuration Kit (Acrylic)
7	MLBG032	Clinometer			a. Area of parallelogram
8	MLBB214	Conic Section			<ul><li>b. Area of Right Angled Triangle</li><li>c. Area of Acute Angled Triangle</li></ul>
		a. Hyperbola			d. Area of Obtuse Angled Triangle
		b. Parabola			e. Area of Rhombus
		c. Ellipse d. Circle			f. Area of Trapezium g. Midpoint Theorem
9	MLBB216#	Derivation of Value of Pie			h. Properties of Parallelogram
10	MLBT005	Direct Proportion (Acrylic)			<ul> <li>Quadrilateral formed by the Midpoint of a Quadrilateral</li> </ul>
11	MLBT052#	Euclid's Division Algorithm			j. Area of circle
12	MLBB208	Geo board Circle	28	MLBT017#	Mode
13	MLBB211B	Geometrical Solids (Big)	29	MLBT042#	Ortho Centre of a Triangle
14	MLBB210	Geometry Box	30	MLBT014	Parallel lines and Transversal
15	MLBG014	Geometry Kit	31	MLBB268	Perpendicular Line Segment
16	MLBB271	Graph Roll up Chart	32	MLBP012#	Physical Balance
17	MLBG009	Hollow Cylinder	33	MLBT019#	Pie Chart
18	MLBB282	Identity set - 1	34	MLBB213	Polyhedron and their Net
		1. Pythagoras Theorem	35	MLBB262	Probability Kit
		2. (a + b) <sup>2</sup> 3. (a - b) <sup>2</sup>			a. Dice- set of 2 Pcs b. Plauing Cards
		4. $(a + b)^3$			c. Set of 400 marbles
19	MLBB283	Identity Set - 2	36	MLBB276	Pythagoras Theorem
		1. (x + a) (x + b)	37	MLBT045	Quadrant
		2. $(a + b + c)^2$	38	MLBT008	Ratio and Percentage
		3. (a + b) <sup>2</sup> - (a - b) <sup>2</sup> 4. a <sup>2</sup> - b <sup>2</sup> = (a + b) (a - b)	39	MLBB280	Ratio of Area of Similar Triangles
20	MLBB284	Identity Set - 3	40	MLBT043	Real Numbers
20	LDD207	1. Angle Property of cyclic Quadrilateral	41	MLBG054#	Secondary Chart Set of 21
		2. Angle Sum property of Quadrilateral	42	MLAB012#	Secondary Kit
		<ol> <li>Angle Sum Property of Triangle</li> <li>Exterior Angle of Regular Polygon</li> </ol>	43	MLBB234	Set of Volumetric Cups (Plastic)
21	MLBT029	Incentre of a Triangle	44	MLBG051	Sextant







Geometrical Shapes (Big)







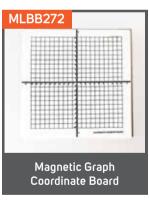


Identity Set - 2









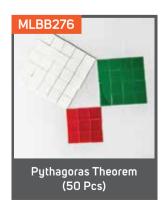


















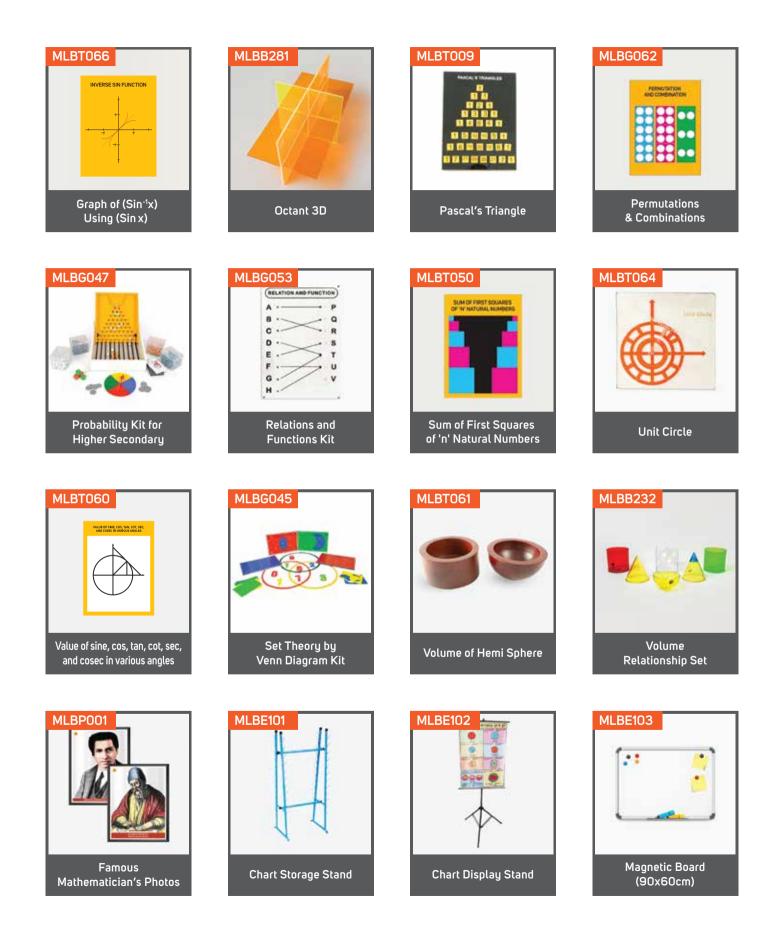
No.	Code	Category	No.	Code	Category
45	MLBT050	of Polynomials	50	MLBB279	Triangle Kit
46	MLBT058	Sum of First 'n' Even Numbers	51	MLBB277	Working Model of Pythagoras
47	MLBT057	Sum of First 'n' Natural Numbers			Theorem
48	MLBT059	Sum of First 'n' Odd Numbers	52	MLBG012	X-Y Axes Geo-Board
49	MLBB212	Transparent Geometrical Shape			

## Higher Secondary Maths Lab

No.	Code	Category	No.	Code	Category
1	MLBT068	Alternate Segment Theorem	16	MLBT038#	Scalars and Vectors
2	MLBG018	Arithmetic Progression Kit	17	MLBT071#	Section Formula
3	MLBG052#	Conic Section with Standard	18	MLBT067	Sum of First Square Of 'n' Natural
		Equation Kit			Numbers
4	MLBT040	Construction of parabola	19	MLBT064	Unit Circle
5	MLBG010	Cube & Sphere	20	MLBT060	Value of Sine, Cos, Tan, Cot, Sec, and
6	MLBT070#	Distance formula			Cosec in Various Angles
7	MLBG046	Geometric Progression Kit	21	MLBG045	Venn diagram - Set theory
8	MLBT063	Golden Ratio	22	MLBT061	Volume of Hemi Sphere
9	MLBT066	Graph of (Sin-1 x) Using (Sin x)	23	MLBB232	Volume Relationship Set
10	MLBT065#	Inverse Trigonometric Function			a. Hemi Sphere
11	MLBT011b#	Linear Equations - Two Variable			b. Sphere c. Cone
12	MLBB281	Octant 3D			d. Cube
13	MLBT009	Pascal's Triangle			e. 2 Cylinders
14	MLBT062	Permutations & Combinations			f. Frustum
15	MLBG047	Probability Kit for Higher Secondary			
16	MLBG053	Relations & Functions Kit			
17	MLBT039#	Rolle's Theorem			

Note: Items common to primary, upper primary, secondary, and higher secondary classes.

No.	Code	Category	No.	Code	Category
1	MLBP001	Photos of Famous Mathematicians	3	MLBE102	Chart Display Stand
2	MLBE101	Chart Storage Stand	4	MLBE103	Magnetic Board



## Maths Lab Room Design



















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