

CBSE Class 10 Maths Updated Syllabus

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Sl. No.	Unit Name	Marks
I	Number System	6
II	Algebra	20
III	Coordinate Geometry	6
IV	Geometry	15
V	Trigonometry	12
VI	Mensuration	10
VII	Statistics & Probability	11
	TOTAL	80

Unit 1: Number Systems

1. Real Number

Fundamental Theorem of Arithmetic - statements after reviewing work done earlier and after illustrating and motivating through examples. Decimal representation of rational numbers in terms of terminating/non-terminating recurring decimals.

Unit 2: Algebra

1. Polynomials

Zeros of a polynomial. Relationship between zeroes and coefficients of quadratic polynomials only.

2. Pair of Linear Equations in Two Variables

Pair of linear equations in two variables and graphical method of their solution, consistency/inconsistency. Algebraic conditions for number of solutions. Solution of a pair of linear equations in two variables algebraically - by substitution and by elimination. Simple situational problems. Simple problems on equations reducible to linear equations.

3. Quadratic Equations

A quadratic equation in standard form is $ax^2+bx+c=0$, ($a \neq 0$)

$ax^2+bx+c=0$, ($a \neq 0$). Factorization and the quadratic formula are used to solve quadratic equations (only real roots).

The relationship between the discriminant and the nature of the roots. To be included are quadratic equation-based situational situations relating to daily activities.

4. Arithmetic Progressions

The reason you want to learn about Arithmetic Progression? The n th term and the sum of the first n terms of A.P. are deduced and used to solve difficulties in everyday life.

Unit 3: Coordinate Geometry

1. Coordinate Geometry

LINES (In two-dimensions)

Review: Concepts of coordinate geometry, graphs of linear equations. Distance formula. Section formula (internal division)

Unit 4: Geometry

1. Triangles

Definitions, examples, and counter examples of similar triangles.

1. (Prove) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio.
2. (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.
3. (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional, and the triangles are similar.
4. (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal, and the two triangles are similar.
5. (Motivate) If one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.
6. (Motivate) If a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to each other.
7. (Motivate) The ratio of the areas of two similar triangles is equal to the ratio of the squares of their corresponding sides.
8. (Prove) In a right triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides.
9. (Motivate) In a triangle, if the square on one side is equal to sum of the squares on the other two sides, the angle opposite to the first side is a right angle.

2. Circles

Tangent to a circle at point of contact

1. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact.
2. (Prove) The lengths of tangents drawn from an external point to a circle are equal.

Unit 5: Trigonometry

1. Introduction To Trigonometry

Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined). Values of the trigonometric ratios of 30° , 45° and 60° . Relationships between the ratios.

2. Trigonometric Identities

Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$. Only simple identities to be given

3. HEIGHTS AND DISTANCES: Angle of elevation, Angle of Depression.

Simple height and distance problems. There should be no more than two right triangles in a problem. Elevation/depression angles should be no more than 30° , 45° , and 60° .

Unit 6: Mensuration

1. Areas Related to Circles

Motivate the area of a circle, area of sectors and segments of a circle. Problems based on areas and perimeter/circumference of the above-said plane figures. (In calculating the area of a segment of a circle, problems should be restricted to the central angle of 60° and 90° only.

Plane figures involving triangles, simple quadrilaterals, and circles should be taken.)

2. SURFACE AREAS AND VOLUMES

Surface areas and volumes of any two of the following combinations: cubes, cuboids, spheres, hemispheres, and right circular cylinders/cones

Unit 7: Statistics & Probability

1. Statistics

Mean, median, and mode of grouped data (bimodal situation to be excluded).

2. Probability

The classical definition of probability. Simple problems on finding the probability of an event.

CBSE Class 10 Maths Syllabus Internal Assessment

Unlock the insights into CBSE Class 10 Maths Syllabus NCERT for Internal Assessment with our comprehensive table. Dive into the details and prepare effectively for your assessments.

S. No.	Components	Marks
1	Written Examination and Various Assessments (5+5)	10
2	Compilation/ Portfolio	05
3	Practical Work (Conducting laboratory activities from the recommended textbooks)	05
	Overall	20

(These internal evaluation criteria are valid for both Mathematics Standard and Mathematics Basic.)

CBSE Class 10 Maths (Standard) Question Paper Design

Explore the question paper design for the CBSE Class 10 Mathematics (Standard) examination with this detailed table. Understand the distribution of marks across various sections to effectively prepare for your exams.

Mathematics-Standard Question Paper Design Class – X

Time - 3 Hours

Max. Marks - 80

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1.	<p>Remembering: Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.</p> <p>Understanding: Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas</p>	43	54
2.	<p>Applying: Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.</p>	19	24

3.	<p>Analysing: Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.</p> <p>Evaluating: Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.</p> <p>Creating: Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions</p>	18	22
Total		80	100

CBSE Class 10 Maths (Basic) Question Paper Design

Introducing the comprehensive breakdown of the CBSE Class 10 Maths (Basic) Question Paper Design. Gain insights into the structure and distribution of marks for different question types, allowing for effective exam preparation and strategy formulation. Understanding the question paper design is essential for students aiming to excel in the Class 10 Maths (Basic) examination.

Mathematics-Basic Question Paper Design Class – X

Time - 3 Hours

Max. Marks - 80

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1.	<p>Remembering: Demonstrate recall of learned material by recalling facts, terms, basic concepts, and answers.</p> <p>Understanding: Showcase comprehension of facts and ideas by organizing, comparing, translating, interpreting, describing, and stating main ideas.</p>	60	75
2.	<p>Applying: Apply acquired knowledge, facts, techniques, and rules to solve problems in new contexts.</p>	12	15
3.	<p>Analysing: Break down information into parts, identify motives or causes, make inferences, and provide evidence to support generalizations.</p>	08	10
4.	<p>Evaluating: Present and defend opinions by judging information, validity of ideas, or quality of work based on a set of criteria.</p>		
5.	<p>Creating: Compile information in new ways, combine elements into new patterns, or propose alternative solutions.</p>		

	Total	80	100
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Prescribed Books for Class 10 Maths

For students of CBSE Class 10, having the right books is crucial for a thorough understanding of mathematics concepts and scoring well in exams. Here are some recommended books specifically tailored to meet the CBSE Board Class 10 Mathematics curriculum requirements.

- Mathematics - Textbook for Class X - NCERT Publication
- Guidelines for Mathematics Laboratory in Schools, class X - CBSE Publication
- Laboratory Manual - Mathematics, secondary stage - NCERT Publication
- Mathematics exemplar problems for class X, NCERT publication