**List of Important Maths Formulas for Class 7**

* ax / ay = ax-y
* ax /bx = (a/b)x
* (ax)y = axy
* (a-b-c)2 = a2 + b2 + c2 - 2ab + 2bc - 2ac
* Increase in [Percentage](https://www.cuemath.com/commercial-math/percentages/) = (Change / Original Amount ) × 100
* Profit percent = (Profit / Cost price) × 100
* [Simple Interest](https://www.cuemath.com/commercial-math/simple-interest/) = (Principal × Rate × Time) / 100
* Amount = Principal + Interest
* [Pythagoras Theorem](https://www.cuemath.com/geometry/pythagoras-theorem/) : (Hypotenuse)2 = (Adjacent Side)2 + (Opposite Side)2
* [Area of a Circle](https://www.cuemath.com/geometry/area-of-a-circle/) = πr2, where 'r' is the radius of a circle and π = 22/7 or 3.14

**Rational Numbers Class 7 Math Formulas**

The [rational numbers](https://www.cuemath.com/numbers/rational-numbers/) class 7 math formulas help students to get an idea of performing arithmetic operations on rational numbers.

* Product of rational numbers = (Product of Numerators) / (Product of Denominators)
* First Rational Number × (Reciprocal of other Rational Number)

**Practical Geometry Class 7 Math Formulas**

The simple shapes that we see around us have their own importance and usage in our daily activities. Hence, the practical [geometry](https://www.cuemath.com/geometry/) class 7 math formulas help the students to learn more about these shapes and the calculations involved with their dimensions.

* [Area of a Square](https://www.cuemath.com/measurement/area-of-square/) = Side2
* [Perimeter of a Square](https://www.cuemath.com/measurement/perimeter-of-square/) = 4 × Side
* [Area of Rectangle](https://www.cuemath.com/measurement/area-of-rectangle/) = Length × Breadth
* [Perimeter of a Rectangle](https://www.cuemath.com/measurement/perimeter-of-a-rectangle/) = 2 × (Length + Breadth)
* [Area of a Parallelogram](https://www.cuemath.com/measurement/area-of-parallelogram/) = Base × Height
* [Area of Triangle](https://www.cuemath.com/measurement/area-of-triangle/) = 1/ 2 × Base × Height
* [Circumference of a circle](https://www.cuemath.com/geometry/circumference-of-a-circle/) = π d, where 'd' is the diameter of a circle and π = 22/7 or 3.14
* [Area of a circle](https://www.cuemath.com/geometry/area-of-a-circle/) = πr2

**Exponents and Power Formulas for Class 7 Maths**

An [exponent](https://www.cuemath.com/algebra/exponent-rules/) represents the value which refers to the number of times a number is multiplied by itself. For example, 4 × 4 × 4 can be written as 43. Here, 4 is the base and 3 is the exponent. The formulas (laws) related to exponents help to carry out multiple operations while dealing with large numbers. Here is a list of the different laws of exponents that are used:

* Law of Product: am × an = am+n
* Law of Quotient: am/an = am-n
* Law of Zero Exponent: a0 = 1
* Law of Negative Exponent: a-m = 1/am
* Law of Power of a Power: (am)n = amn
* Law of Power of a Product: (ab)m = ambm
* Law of Power of a Quotient: (a/b)m = am/bm

**Comparing Quantities Formulas for Class 7 Maths**

In our daily lives, we come across instances where we need to compare two quantities. They might be weights, wages or grades, etc. Hence, it is important to have a clear understanding of ratios and proportions. [Ratio](https://www.cuemath.com/commercial-math/ratio/) is the comparison between two quantities of the same units which shows how much of one quantity is present in the other quantity.

* If any two ratios need to be compared, it can be done so by converting them to like fractions. The two given ratios are equivalent if the two fractions are equal.
* For any four quantities, if their two ratios are equivalent, then those four quantities are said to be proportionate.
* Increase in Percentage = (Change / Original Amount ) × 100
* Profit percent = (Profit / Cost price) × 100
* Simple Interest = (Principal × Rate × Time) / 100
* Amount = Principal + Interest

**Algebra Formulas for Class 7 Maths**

[Variables](https://www.cuemath.com/algebra/variable-expressions/) and constants are used to create algebraic expressions. The algebraic entities mentioned below will help the students deal with variables and constants that need to be added, subtracted, divided or multiplied in order to form an algebraic equation.

* The numerical value in the term is called the coefficient.
* On adding two [algebraic expressions](https://www.cuemath.com/algebra/algebraic-expression/) the like terms are added together while unlike ones are left out as they are.
* (a-b)2 = a2 - 2ab + b2
* (a-b-c)2 = a2 + b2 + c2 - 2ab + 2bc - 2ac