

Maths Class 9 Formula

Mensuration Formulas

- Surface Area of a Cuboid = $2(lb + bh + hl)$, where 'l', 'b' and 'h' are the length, breadth, and height respectively.
- Curved Surface Area of a Cone = $1/2 \times l \times 2\pi r = \pi rl$, where 'r' is its base radius and 'l' its slant height, then, 'l' = Square root of $(r^2 + h^2)$
- Surface Area of a Sphere = $4\pi r^2$
- Volume of a Cuboid = Base Area \times Height = Length \times Breadth \times Height
- Volume of a Cube = a^3 where 'a' is the edge of the cube.
- Volume of a Cylinder = $\pi r^2 h$, where, 'r' and 'h' are radius and height respectively.
- Volume of a Cone = $(1/3)\pi r^2 h$
- Volume of a Sphere = $(4/3)\pi r^3$
- Volume of a Hemisphere = $(2/3)\pi r^3$

Algebra Formulas

- $(a + b)^2 = a^2 + 2ab + b^2$
- $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$

Statistics Formula

- Class-mark = $(\text{Upper limit} + \text{Lower limit}) / 2$
- Mean = Sum of the observations / Total number of observations
- Mode = The observation occurring the most frequent times
- Experimental Probability Formula: The trial counts in which the event (E) has occurred / The sum of trials

Number System Formulas

- $\sqrt{ab} = \sqrt{a} \sqrt{b}$
- $\sqrt{a/b} = \sqrt{a} / \sqrt{b}$
- $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b}) = a - b$
- $(\sqrt{a} + \sqrt{b})^2 = a + 2\sqrt{ab} + b$
- $(a + \sqrt{b})(a - \sqrt{b}) = a^2 - b$
- $(a + b)(a - b) = a^2 - b^2$

