

# Mathematics 1 - Basics of Algebra

Topics : [Computer engineering](#)

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## 1. Variables and Constants:

- Variables represent unknown quantities, typically denoted by letters like  $x$ ,  $y$ ,  $a$ ,  $b$ , etc.
- Constants are fixed values that do not change.

## 2. Expressions:

- Algebraic expressions combine variables, constants, and mathematical operations like addition, subtraction, multiplication, and division.

## 3. Terms:

- Terms are parts of expressions separated by addition or subtraction.

## 4. Coefficients:

- Coefficients are the numerical factors of terms in expressions.

## 5. Equations:

- Equations assert the equality of two expressions using an equal sign ( $=$ ).

## 6. Inequalities:

- Inequalities compare expressions using symbols like  $<$ ,  $>$ ,  $\leq$ , or  $\geq$ .

## 7. Operations:

- Basic operations include addition ( $+$ ), subtraction ( $-$ ), multiplication ( $\times$ ), and division ( $\div$ ).

## 8. Factoring:

- Factoring expresses an expression as the product of its factors.

## 9. Solving Equations and Inequalities:

- Solving involves manipulating expressions to isolate variables and find their values.

## 10. Graphing:

11. Graphing represents equations and inequalities visually on a coordinate plane.

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