**Algebra formulas**

Here a list of all important formulas of algebra is provided. Students must go through the list to solve difficult algebraic equations very quickly.

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|  | **Important Algebra Formulas** |
|  1 | a²– b² = (a – b)(a + b) |
| 2 | (a + b)²=  a²+ 2ab + b² |
| 3 | a²+ b²= (a + b)²– 2ab |
| 4 | (a – b)² = a²– 2ab+ b² |
| 5 | (a + b + c)² = a² + b² + c²+ 2ab + 2bc + 2ca |
| 6 | (a – b – c)² = a²+ b²+ c²– 2ab + 2bc – 2ca |
| 7 | (a + b)³ = a³+ 3a²b + 3ab²+ b³ |
| 8 | (a + b)³ = a³ + b³ + 3ab(a + b) |
| 9 | (a – b)³= a³ – 3a²b + 3ab² – b³ |
| 10 | (a – b)³= a³ – b³ – 3ab(a – b) |
| 11 | a³ – b³ = (a – b)(a²+ ab + b²) |
| 12 | a³ + b³ = (a + b)(a²– ab + b²) |
| 13 | (a + b)⁴= a⁴+ 4a³b + 6a²b² + 4ab³ + b² |
| 14 | (a – b)⁴= a4 – 4a³b + 6a²b² – 4ab³+ b⁴ |
| 15 | a⁴ – b⁴= (a – b)(a + b)(a² + b²) |
| 16 | a⁵ – b⁵= (a – b)(a⁴ + a³b + a²b² + ab³+ b⁴) |