



General Formulae on Algebra

| | |
|--------------------------|--|
| $(x + a)(x + b)$ | $x^2 + (a + b)x + ab$ |
| $(a + b)^2$ | $a^2 + b^2 + 2ab$ |
| $(a - b)^2$ | $a^2 + b^2 - 2ab$ |
| $a^2 - b^2$ | $(a + b)(a - b)$ |
| $(a + b + c)^2$ | $a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$ |
| $(a + b)^3$ | $a^3 + b^3 + 3a^2b + 3ab^2$ |
| | $a^3 + b^3 + 3ab(a + b)$ |
| $(a - b)^3$ | $a^3 - b^3 - 3a^2b + 3ab^2$ |
| | $a^3 - b^3 - 3ab(a - b)$ |
| $a^3 + b^3$ | $(a + b)(a^2 - ab + b^2)$ |
| | $(a + b)^3 - 3ab(a + b)$ |
| $a^3 - b^3$ | $(a - b)(a^2 + ab + b^2)$ |
| | $(a - b)^3 + 3ab(a - b)$ |
| $a^3 + b^3 + c^3 - 3abc$ | $(a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$ |
| | If $a + b + c = 0$, then $a^3 + b^3 + c^3 = 3abc$ |

Some Important Derivations

| | |
|---|--|
| $a^2 + b^2$ | $(a + b)^2 - 2ab$ |
| | $(a - b)^2 + 2ab$ |
| | $\frac{1}{2}[(a + b)^2 + (a - b)^2]$ |
| $(a + b)^2$ | $(a - b)^2 + 4ab$ |
| $(a - b)^2$ | $(a + b)^2 - 4ab$ |
| $a^3 + b^3 + c^3$ | $(a + b + c)^3 - 3(a + b)(b + c)(c + a)$ |
| $a^2 + b^2 + c^2 - ab - bc - ca$ | $\frac{1}{2}[(a - b)^2 + (b - c)^2 + (c - a)^2]$ |
| If $a^2 + b^2 + c^2 - ab - bc - ca = 0$ | Then $a = b = c$ |



BROAD ROOT SCHOLARS ACADEMY

FROM BASICS TO ADVANCE.....

COMPLETE GUIDANCE FOR BOARD + NEET/JEE

[OLYMPIAD | CUET-UG | IPMAT | JIPMAT | IISC | IISER | NISER | NDA]

FOUNDATION PROGRAMME

[Class VIII-X]

-  GENERAL MATHEMATICS
-  ADVANCED MATHEMATICS
-  GENERAL SCIENCE
-  Extended/Core MATHEMATICS [Cambridge IGCSE]

INTEGRATED PROGRAMME

[Class XI-XII]

-  PHYSICS
-  CHEMISTRY
-  MATHEMATICS [Core/Applied]
-  BIOLOGY

HOW LEARNING HAPPENS HERE

- ✓ CONCEPT CLARITY FIRST
- ✓ REGULAR TESTS + FEEDBACK
- ✓ DOUBT CLEARING SESSIONS
- ✓ PERSONAL ATTENTION TO EVERY STUDENT
- ✓ NO ROTE LEARNING METHODS

RESULTS ARE A BY-PRODUCT OF THE PROCESS

IS THIS COACHING CENTRE RIGHT FOR YOUR CHILD?

DOES YOUR CHILD

- ✓ STRUGGLE WITH CONCEPT?
- ✓ NEED PERSONAL ATTENTION?
- ✓ AFRAID OF MATHS & SCIENCE?
- ✓ WANT STRONG FUNDAMENTALS?
- ✓ HATE ROTE LEARNING?

IF YES, THEN YOU'RE IN THE RIGHT PLACE.

10 SEATS
PER BATCH
BOOK YOUR
SLOT NOW

SCAN FOR OUR
LOCATION



BOOK YOUR
SEAT NOW



700 22 15 217

99578 72 108

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