SOME BASIC ALGEBRAIC FORMULAE:

1. $(a + b)^2 = a^2 + 2ab + b^2$.
2. $(a - b)^2 = a^2 - 2ab + b^2$.
3. $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$.
4. $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$.
5. $(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$.
6. $(a + b + c)^3 = a^3 + b^3 + c^3 + 3a^2b + 3a^2c + 3b^2c + 3b^2a + 3c^2a + 3c^2a + 6abc$.
7. $a^2 - b^2 = (a + b)(a - b)$.
8. $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$.
9. $a^3 + b^3 = (a + b)(a^2 - ab + b^2)$.
10. $(a + b)^2 + (a - b)^2 = 4ab$.
11. $(a + b)^2 - (a - b)^2 = 2(a^2 + b^2)$.
12. If $a + b + c = 0$, then $a^3 + b^3 + c^3 = 3abc$.