

# Subtraction of Polynomials

Bottom of Form

Subtraction of polynomials can be solved in two methods.

**Follow the following steps to solve in the first method:**

(i) Enclose the part of the expression to be subtracted in parentheses with a negative (-) sign prefixed

(ii) Remove the parentheses by changing the sign of each term of the polynomial expression which is in the parentheses.

(iii) Arrange the like terms.

(iv) Finally add the like terms to find the required subtraction.

**For example:**

**1. Subtract: 2x - 5y + 3z from 5x + 9y - 2z.**

First we need to enclose the first part which is to be subtracted in parentheses with a negative (-) sign prefixed.

5x + 9y - 2z – (2x - 5y + 3z)

Now we need to remove the parentheses by changing the sign of each term which is in the parentheses.

= 5x + 9y - 2z – 2x + 5y - 3z

= 5x – 2x + 9y + 5y - 2z - 3z, by arranging the like terms.

= 3x + 14y - 5z

**2. Subtract: -6x2 - 8y3 + 15z from x2 – y3 + z.**  
  
First we need to enclose the first part which is to be subtracted in parentheses with a negative (-) sign prefixed.  
  
x2 - y3 + z – (-6x2 - 8y3 + 15z)  
  
Now we need to remove the parentheses by changing the sign of each term which is in the parentheses.  
  
= x2 - y3 + z + 6x2 + 8y3 - 15z  
  
= x2 + 6x2 - y3 + 8y3 + z - 15z, by arranging the like terms.  
  
= 7x2 + 7y3 - 14z