

**Addition of Polynomials**

Top of Form

Addition of polynomials can be solved in two methods.

(i) By arranging the like terms together and then add.

**For example:**

**1. Add: 5x + 3y, 4x – 4y + z and -3x + 5y + 2z**

First we need to write in the addition form.

Thus, the required addition

= (5x + 3y) + (4x – 4y + z) + (-3x + 5y + 2z)

**=**5x + 3y + 4x – 4y + z - 3x + 5y + 2z

Now we need to arrange all the like terms and then all the like terms are added.

= 5x + 4x - 3x + 3y – 4y + 5y + z + 2z

= 6x + 4y + 3z

**2. Add: 3a2 + ab – b2, -a2 + 2ab + 3b2 and 3a2 – 10ab + 4b2**  
  
First we need to write in the addition form.  
Thus, the required addition  
  
= (3a2 + ab – b2) + (-a2 + 2ab + 3b2) + (3a2 – 10ab + 4b2)  
  
= 3a2 + ab – b2 - a2 + 2ab + 3b2 + 3a2 – 10ab + 4b2  
Here, we need to arrange the like terms and then add  
  
= 3a2 - a2 + 3a2 + ab + 2ab – 10ab – b2 + 3b2 + 4b2  
  
= 5a2 – 7ab + 6b2