

# Subtraction of Binomials Solved Examples

## Example 1

**Subtract:**  $(30b - 13) - (7a + 1)$

Given binomials are:

First Binomial =  $(30b - 13)$

Second Binomial =  $(7a + 1)$

Form subtraction expression:

$$(30b - 13) - (7a + 1)$$

Open brackets and change signs of second binomial:

$$30b - 13 - 7a - 1$$

Arrange like terms together:

$$30b - 7a - 13 - 1$$

Subtract like terms and simplify:

$$30b - 7a - 14$$

**Hence,**  $(30b - 13) - (7a + 1) = 30b - 7a - 14$

## Example 2

**Subtract:**  $(7p + 6) - (9p - 2)$

Given binomials are:

First Binomial =  $(7p + 6)$

Second Binomial =  $(9p - 2)$

Form subtraction expression:

$$(7p + 6) - (9p - 2)$$

Open brackets and change signs of second binomial:

$$7p + 6 - 9p + 2$$

Arrange like terms together:

$$7p - 9p + 6 + 2$$

Subtract like terms and simplify:

$$-2p + 8$$

**Hence,**  $(7p + 6) - (9p - 2) = -2p + 8$

### Example 3

**Subtract:**  $(28a - 9) - (15a - 4)$

Given binomials are:

First Binomial =  $(28a - 9)$

Second Binomial =  $(15a - 4)$

Form subtraction expression:

$$(28a - 9) - (15a - 4)$$

Open brackets and change signs of second binomial:

$$28a - 9 - 15a + 4$$

Arrange like terms together:

$$28a - 15a - 9 + 4$$

Subtract like terms and simplify:

$$13a - 5$$

**Hence,**  $(28a - 9) - (15a - 4) = 13a - 5$

### Example 4

**Subtract:**  $(15b - 14) - (19b - 1)$

Given binomials are:

First Binomial =  $(15b - 14)$

Second Binomial =  $(19b - 1)$

Form subtraction expression:

$$(15b - 14) - (19b - 1)$$

Open brackets and change signs of second binomial:

$$15b - 14 - 19b + 1$$

Arrange like terms together:

$$15b - 19b - 14 + 1$$

Subtract like terms and simplify:

$$-4b - 13$$

**Hence,**  $(15b - 14) - (19b - 1) = -4b - 13$

## Example 5

**Subtract:**  $(29b - 6) - (13b - 1)$

Given binomials are:

First Binomial =  $(29b - 6)$

Second Binomial =  $(13b - 1)$

Form subtraction expression:

$$(29b - 6) - (13b - 1)$$

Open brackets and change signs of second binomial:

$$29b - 6 - 13b + 1$$

Arrange like terms together:

$$29b - 13b - 6 + 1$$

Subtract like terms and simplify:

$$16b - 5$$

**Hence,**  $(29b - 6) - (13b - 1) = 16b - 5$

## Example 6

**Subtract:**  $(17b + 14) - (15b - 15)$

Given binomials are:

First Binomial =  $(17b + 14)$

Second Binomial =  $(15b - 15)$

Form subtraction expression:

$$(17b + 14) - (15b - 15)$$

Open brackets and change signs of second binomial:

$$17b + 14 - 15b + 15$$

Arrange like terms together:

$$17b - 15b + 14 + 15$$

Subtract like terms and simplify:

$$2b + 29$$

**Hence,**  $(17b + 14) - (15b - 15) = 2b + 29$

## Example 7

**Subtract:**  $(21p - 6) - (12b + 1)$

Given binomials are:

First Binomial =  $(21p - 6)$

Second Binomial =  $(12b + 1)$

Form subtraction expression:

$$(21p - 6) - (12b + 1)$$

Open brackets and change signs of second binomial:

$$21p - 6 - 12b - 1$$

Arrange like terms together:

$$21p - 12b - 6 - 1$$

Subtract like terms and simplify:

$$21p - 12b - 7$$

**Hence,**  $(21p - 6) - (12b + 1) = 21p - 12b - 7$

## Example 8

**Subtract:**  $(30x + 14) - (23y + 9)$

Given binomials are:

First Binomial =  $(30x + 14)$

Second Binomial =  $(23y + 9)$

Form subtraction expression:

$$(30x + 14) - (23y + 9)$$

Open brackets and change signs of second binomial:

$$30x + 14 - 23y - 9$$

Arrange like terms together:

$$30x - 23y + 14 - 9$$

Subtract like terms and simplify:

$$30x - 23y + 5$$

**Hence,**  $(30x + 14) - (23y + 9) = 30x - 23y + 5$

## Example 9

**Subtract:**  $(26b + 10) - (22x + 10)$

Given binomials are:

First Binomial =  $(26b + 10)$

Second Binomial =  $(22x + 10)$

Form subtraction expression:

$$(26b + 10) - (22x + 10)$$

Open brackets and change signs of second binomial:

$$26b + 10 - 22x - 10$$

Arrange like terms together:

$$26b - 22x + 10 - 10$$

Subtract like terms and simplify:

$$26b - 22x$$

**Hence,**  $(26b + 10) - (22x + 10) = 26b - 22x$

## Example 10

**Subtract:**  $(23m + 6) - (6m + 5)$

Given binomials are:

First Binomial =  $(23m + 6)$

Second Binomial =  $(6m + 5)$

Form subtraction expression:

$$(23m + 6) - (6m + 5)$$

Open brackets and change signs of second binomial:

$$23m + 6 - 6m - 5$$

Arrange like terms together:

$$23m - 6m + 6 - 5$$

Subtract like terms and simplify:

$$17m + 1$$

**Hence,**  $(23m + 6) - (6m + 5) = 17m + 1$

## Example 11

**Subtract:**  $(19m + 13) - (10p + 2)$

Given binomials are:

First Binomial =  $(19m + 13)$

Second Binomial =  $(10p + 2)$

Form subtraction expression:

$$(19m + 13) - (10p + 2)$$

Open brackets and change signs of second binomial:

$$19m + 13 - 10p - 2$$

Arrange like terms together:

$$19m - 10p + 13 - 2$$

Subtract like terms and simplify:

$$19m - 10p + 11$$

**Hence,**  $(19m + 13) - (10p + 2) = 19m - 10p + 11$

## Example 12

**Subtract:**  $(8x - 3) - (19y - 3)$

Given binomials are:

First Binomial =  $(8x - 3)$

Second Binomial =  $(19y - 3)$

Form subtraction expression:

$$(8x - 3) - (19y - 3)$$

Open brackets and change signs of second binomial:

$$8x - 3 - 19y + 3$$

Arrange like terms together:

$$8x - 19y - 3 + 3$$

Subtract like terms and simplify:

$$8x - 19y$$

**Hence,**  $(8x - 3) - (19y - 3) = 8x - 19y$

## Example 13

**Subtract:**  $(30p + 8) - (14x + 1)$

Given binomials are:

First Binomial =  $(30p + 8)$

Second Binomial =  $(14x + 1)$

Form subtraction expression:

$$(30p + 8) - (14x + 1)$$

Open brackets and change signs of second binomial:

$$30p + 8 - 14x - 1$$

Arrange like terms together:

$$30p - 14x + 8 - 1$$

Subtract like terms and simplify:

$$30p - 14x + 7$$

**Hence,**  $(30p + 8) - (14x + 1) = 30p - 14x + 7$

## Example 14

**Subtract:**  $(12y + 5) - (27y - 2)$

Given binomials are:

First Binomial =  $(12y + 5)$

Second Binomial =  $(27y - 2)$

Form subtraction expression:

$$(12y + 5) - (27y - 2)$$

Open brackets and change signs of second binomial:

$$12y + 5 - 27y + 2$$

Arrange like terms together:

$$12y - 27y + 5 + 2$$

Subtract like terms and simplify:

$$-15y + 7$$

**Hence,**  $(12y + 5) - (27y - 2) = -15y + 7$

## Example 15

**Subtract:**  $(22b - 8) - (14x - 12)$

Given binomials are:

First Binomial =  $(22b - 8)$

Second Binomial =  $(14x - 12)$

Form subtraction expression:

$$(22b - 8) - (14x - 12)$$

Open brackets and change signs of second binomial:

$$22b - 8 - 14x + 12$$

Arrange like terms together:

$$22b - 14x - 8 + 12$$

Subtract like terms and simplify:

$$22b - 14x + 4$$

**Hence,**  $(22b - 8) - (14x - 12) = 22b - 14x + 4$

## Example 16

**Subtract:**  $(20y + 2) - (30b + 11)$

Given binomials are:

First Binomial =  $(20y + 2)$

Second Binomial =  $(30b + 11)$

Form subtraction expression:

$$(20y + 2) - (30b + 11)$$

Open brackets and change signs of second binomial:

$$20y + 2 - 30b - 11$$

Arrange like terms together:

$$20y - 30b + 2 - 11$$

Subtract like terms and simplify:

$$20y - 30b - 9$$

**Hence,**  $(20y + 2) - (30b + 11) = 20y - 30b - 9$

## Example 17

**Subtract:**  $(15m + 11) - (10m + 15)$

Given binomials are:

First Binomial =  $(15m + 11)$

Second Binomial =  $(10m + 15)$

Form subtraction expression:

$$(15m + 11) - (10m + 15)$$

Open brackets and change signs of second binomial:

$$15m + 11 - 10m - 15$$

Arrange like terms together:

$$15m - 10m + 11 - 15$$

Subtract like terms and simplify:

$$5m - 4$$

**Hence,**  $(15m + 11) - (10m + 15) = 5m - 4$

## Example 18

**Subtract:**  $(11a + 9) - (26b + 9)$

Given binomials are:

First Binomial =  $(11a + 9)$

Second Binomial =  $(26b + 9)$

Form subtraction expression:

$$(11a + 9) - (26b + 9)$$

Open brackets and change signs of second binomial:

$$11a + 9 - 26b - 9$$

Arrange like terms together:

$$11a - 26b + 9 - 9$$

Subtract like terms and simplify:

$$11a - 26b$$

**Hence,**  $(11a + 9) - (26b + 9) = 11a - 26b$

## Example 19

**Subtract:**  $(14x + 12) - (24x - 7)$

Given binomials are:

First Binomial =  $(14x + 12)$

Second Binomial =  $(24x - 7)$

Form subtraction expression:

$$(14x + 12) - (24x - 7)$$

Open brackets and change signs of second binomial:

$$14x + 12 - 24x + 7$$

Arrange like terms together:

$$14x - 24x + 12 + 7$$

Subtract like terms and simplify:

$$-10x + 19$$

**Hence,**  $(14x + 12) - (24x - 7) = -10x + 19$

## Example 20

**Subtract:**  $(29m + 13) - (13m - 8)$

Given binomials are:

First Binomial =  $(29m + 13)$

Second Binomial =  $(13m - 8)$

Form subtraction expression:

$$(29m + 13) - (13m - 8)$$

Open brackets and change signs of second binomial:

$$29m + 13 - 13m + 8$$

Arrange like terms together:

$$29m - 13m + 13 + 8$$

Subtract like terms and simplify:

$$16m + 21$$

**Hence,**  $(29m + 13) - (13m - 8) = 16m + 21$