

# Subtraction of Binomials Solved Examples

## Example 1

**Subtract:**  $(24x + 15) - (18b + 9)$

Given binomials are:

First Binomial =  $(24x + 15)$

Second Binomial =  $(18b + 9)$

Form subtraction expression:

$$(24x + 15) - (18b + 9)$$

Open brackets and change signs of second binomial:

$$24x + 15 - 18b - 9$$

Arrange like terms together:

$$24x - 18b + 15 - 9$$

Subtract like terms and simplify:

$$24x - 18b + 6$$

**Hence,**  $(24x + 15) - (18b + 9) = 24x - 18b + 6$

## Example 2

**Subtract:**  $(12a + 4) - (17y + 15)$

Given binomials are:

First Binomial =  $(12a + 4)$

Second Binomial =  $(17y + 15)$

Form subtraction expression:

$$(12a + 4) - (17y + 15)$$

Open brackets and change signs of second binomial:

$$12a + 4 - 17y - 15$$

Arrange like terms together:

$$12a - 17y + 4 - 15$$

Subtract like terms and simplify:

$$12a - 17y - 11$$

**Hence,**  $(12a + 4) - (17y + 15) = 12a - 17y - 11$

### Example 3

**Subtract:**  $(26a - 15) - (9p + 4)$

Given binomials are:

First Binomial =  $(26a - 15)$

Second Binomial =  $(9p + 4)$

Form subtraction expression:

$$(26a - 15) - (9p + 4)$$

Open brackets and change signs of second binomial:

$$26a - 15 - 9p - 4$$

Arrange like terms together:

$$26a - 9p - 15 - 4$$

Subtract like terms and simplify:

$$26a - 9p - 19$$

**Hence,**  $(26a - 15) - (9p + 4) = 26a - 9p - 19$

### Example 4

**Subtract:**  $(11b - 15) - (29b - 13)$

Given binomials are:

First Binomial =  $(11b - 15)$

Second Binomial =  $(29b - 13)$

Form subtraction expression:

$$(11b - 15) - (29b - 13)$$

Open brackets and change signs of second binomial:

$$11b - 15 - 29b + 13$$

Arrange like terms together:

$$11b - 29b - 15 + 13$$

Subtract like terms and simplify:

$$-18b - 2$$

**Hence,**  $(11b - 15) - (29b - 13) = -18b - 2$

## Example 5

**Subtract:**  $(14b - 4) - (5b - 2)$

Given binomials are:

First Binomial =  $(14b - 4)$

Second Binomial =  $(5b - 2)$

Form subtraction expression:

$$(14b - 4) - (5b - 2)$$

Open brackets and change signs of second binomial:

$$14b - 4 - 5b + 2$$

Arrange like terms together:

$$14b - 5b - 4 + 2$$

Subtract like terms and simplify:

$$9b - 2$$

**Hence,**  $(14b - 4) - (5b - 2) = 9b - 2$

## Example 6

**Subtract:**  $(23y - 8) - (24y - 8)$

Given binomials are:

First Binomial =  $(23y - 8)$

Second Binomial =  $(24y - 8)$

Form subtraction expression:

$$(23y - 8) - (24y - 8)$$

Open brackets and change signs of second binomial:

$$23y - 8 - 24y + 8$$

Arrange like terms together:

$$23y - 24y - 8 + 8$$

Subtract like terms and simplify:

$$-1y$$

**Hence,**  $(23y - 8) - (24y - 8) = -1y$

## Example 7

**Subtract:**  $(19x - 2) - (29x + 5)$

Given binomials are:

First Binomial =  $(19x - 2)$

Second Binomial =  $(29x + 5)$

Form subtraction expression:

$$(19x - 2) - (29x + 5)$$

Open brackets and change signs of second binomial:

$$19x - 2 - 29x - 5$$

Arrange like terms together:

$$19x - 29x - 2 - 5$$

Subtract like terms and simplify:

$$-10x - 7$$

**Hence,**  $(19x - 2) - (29x + 5) = -10x - 7$

## Example 8

**Subtract:**  $(16m - 6) - (24x - 4)$

Given binomials are:

First Binomial =  $(16m - 6)$

Second Binomial =  $(24x - 4)$

Form subtraction expression:

$$(16m - 6) - (24x - 4)$$

Open brackets and change signs of second binomial:

$$16m - 6 - 24x + 4$$

Arrange like terms together:

$$16m - 24x - 6 + 4$$

Subtract like terms and simplify:

$$16m - 24x - 2$$

**Hence,**  $(16m - 6) - (24x - 4) = 16m - 24x - 2$

## Example 9

**Subtract:**  $(8x + 12) - (9m - 14)$

Given binomials are:

First Binomial =  $(8x + 12)$

Second Binomial =  $(9m - 14)$

Form subtraction expression:

$$(8x + 12) - (9m - 14)$$

Open brackets and change signs of second binomial:

$$8x + 12 - 9m + 14$$

Arrange like terms together:

$$8x - 9m + 12 + 14$$

Subtract like terms and simplify:

$$8x - 9m + 26$$

**Hence,**  $(8x + 12) - (9m - 14) = 8x - 9m + 26$

## Example 10

**Subtract:**  $(15x + 14) - (22m - 14)$

Given binomials are:

First Binomial =  $(15x + 14)$

Second Binomial =  $(22m - 14)$

Form subtraction expression:

$$(15x + 14) - (22m - 14)$$

Open brackets and change signs of second binomial:

$$15x + 14 - 22m + 14$$

Arrange like terms together:

$$15x - 22m + 14 + 14$$

Subtract like terms and simplify:

$$15x - 22m + 28$$

**Hence,**  $(15x + 14) - (22m - 14) = 15x - 22m + 28$

## Example 11

**Subtract:**  $(21p - 15) - (23p + 9)$

Given binomials are:

First Binomial =  $(21p - 15)$

Second Binomial =  $(23p + 9)$

Form subtraction expression:

$$(21p - 15) - (23p + 9)$$

Open brackets and change signs of second binomial:

$$21p - 15 - 23p - 9$$

Arrange like terms together:

$$21p - 23p - 15 - 9$$

Subtract like terms and simplify:

$$-2p - 24$$

**Hence,**  $(21p - 15) - (23p + 9) = -2p - 24$

## Example 12

**Subtract:**  $(25b - 5) - (14b - 5)$

Given binomials are:

First Binomial =  $(25b - 5)$

Second Binomial =  $(14b - 5)$

Form subtraction expression:

$$(25b - 5) - (14b - 5)$$

Open brackets and change signs of second binomial:

$$25b - 5 - 14b + 5$$

Arrange like terms together:

$$25b - 14b - 5 + 5$$

Subtract like terms and simplify:

$$11b$$

**Hence,**  $(25b - 5) - (14b - 5) = 11b$

## Example 13

**Subtract:**  $(15a - 3) - (6p + 1)$

Given binomials are:

First Binomial =  $(15a - 3)$

Second Binomial =  $(6p + 1)$

Form subtraction expression:

$$(15a - 3) - (6p + 1)$$

Open brackets and change signs of second binomial:

$$15a - 3 - 6p - 1$$

Arrange like terms together:

$$15a - 6p - 3 - 1$$

Subtract like terms and simplify:

$$15a - 6p - 4$$

**Hence,**  $(15a - 3) - (6p + 1) = 15a - 6p - 4$

## Example 14

**Subtract:**  $(6a + 12) - (5x + 4)$

Given binomials are:

First Binomial =  $(6a + 12)$

Second Binomial =  $(5x + 4)$

Form subtraction expression:

$$(6a + 12) - (5x + 4)$$

Open brackets and change signs of second binomial:

$$6a + 12 - 5x - 4$$

Arrange like terms together:

$$6a - 5x + 12 - 4$$

Subtract like terms and simplify:

$$6a - 5x + 8$$

**Hence,**  $(6a + 12) - (5x + 4) = 6a - 5x + 8$

## Example 15

**Subtract:**  $(11a + 4) - (19a - 1)$

Given binomials are:

First Binomial =  $(11a + 4)$

Second Binomial =  $(19a - 1)$

Form subtraction expression:

$$(11a + 4) - (19a - 1)$$

Open brackets and change signs of second binomial:

$$11a + 4 - 19a + 1$$

Arrange like terms together:

$$11a - 19a + 4 + 1$$

Subtract like terms and simplify:

$$-8a + 5$$

**Hence,**  $(11a + 4) - (19a - 1) = -8a + 5$

## Example 16

**Subtract:**  $(12a - 8) - (26b - 6)$

Given binomials are:

First Binomial =  $(12a - 8)$

Second Binomial =  $(26b - 6)$

Form subtraction expression:

$$(12a - 8) - (26b - 6)$$

Open brackets and change signs of second binomial:

$$12a - 8 - 26b + 6$$

Arrange like terms together:

$$12a - 26b - 8 + 6$$

Subtract like terms and simplify:

$$12a - 26b - 2$$

**Hence,**  $(12a - 8) - (26b - 6) = 12a - 26b - 2$

## Example 17

**Subtract:**  $(18x + 7) - (14m - 6)$

Given binomials are:

First Binomial =  $(18x + 7)$

Second Binomial =  $(14m - 6)$

Form subtraction expression:

$$(18x + 7) - (14m - 6)$$

Open brackets and change signs of second binomial:

$$18x + 7 - 14m + 6$$

Arrange like terms together:

$$18x - 14m + 7 + 6$$

Subtract like terms and simplify:

$$18x - 14m + 13$$

**Hence,**  $(18x + 7) - (14m - 6) = 18x - 14m + 13$

## Example 18

**Subtract:**  $(16b + 3) - (21b + 10)$

Given binomials are:

First Binomial =  $(16b + 3)$

Second Binomial =  $(21b + 10)$

Form subtraction expression:

$$(16b + 3) - (21b + 10)$$

Open brackets and change signs of second binomial:

$$16b + 3 - 21b - 10$$

Arrange like terms together:

$$16b - 21b + 3 - 10$$

Subtract like terms and simplify:

$$-5b - 7$$

**Hence,**  $(16b + 3) - (21b + 10) = -5b - 7$

## Example 19

**Subtract:**  $(14x + 5) - (20b - 8)$

Given binomials are:

First Binomial =  $(14x + 5)$

Second Binomial =  $(20b - 8)$

Form subtraction expression:

$$(14x + 5) - (20b - 8)$$

Open brackets and change signs of second binomial:

$$14x + 5 - 20b + 8$$

Arrange like terms together:

$$14x - 20b + 5 + 8$$

Subtract like terms and simplify:

$$14x - 20b + 13$$

**Hence,**  $(14x + 5) - (20b - 8) = 14x - 20b + 13$

## Example 20

**Subtract:**  $(15y + 11) - (6y - 2)$

Given binomials are:

First Binomial =  $(15y + 11)$

Second Binomial =  $(6y - 2)$

Form subtraction expression:

$$(15y + 11) - (6y - 2)$$

Open brackets and change signs of second binomial:

$$15y + 11 - 6y + 2$$

Arrange like terms together:

$$15y - 6y + 11 + 2$$

Subtract like terms and simplify:

$$9y + 13$$

**Hence,**  $(15y + 11) - (6y - 2) = 9y + 13$