

Subtraction of Binomials Solved Examples

Example 1

Subtract: $(21b + 3) - (23b + 12)$

Given binomials are:

First Binomial = $(21b + 3)$

Second Binomial = $(23b + 12)$

Form subtraction expression:

$$(21b + 3) - (23b + 12)$$

Open brackets and change signs of second binomial:

$$21b + 3 - 23b - 12$$

Arrange like terms together:

$$21b - 23b + 3 - 12$$

Subtract like terms and simplify:

$$-2b - 9$$

Hence, $(21b + 3) - (23b + 12) = -2b - 9$

Example 2

Subtract: $(13b - 9) - (19b + 7)$

Given binomials are:

First Binomial = $(13b - 9)$

Second Binomial = $(19b + 7)$

Form subtraction expression:

$$(13b - 9) - (19b + 7)$$

Open brackets and change signs of second binomial:

$$13b - 9 - 19b - 7$$

Arrange like terms together:

$$13b - 19b - 9 - 7$$

Subtract like terms and simplify:

$$-6b - 16$$

Hence, $(13b - 9) - (19b + 7) = -6b - 16$

Example 3

Subtract: $(13b + 9) - (18b - 10)$

Given binomials are:

First Binomial = $(13b + 9)$

Second Binomial = $(18b - 10)$

Form subtraction expression:

$$(13b + 9) - (18b - 10)$$

Open brackets and change signs of second binomial:

$$13b + 9 - 18b + 10$$

Arrange like terms together:

$$13b - 18b + 9 + 10$$

Subtract like terms and simplify:

$$-5b + 19$$

Hence, $(13b + 9) - (18b - 10) = -5b + 19$

Example 4

Subtract: $(19b + 10) - (29p + 12)$

Given binomials are:

First Binomial = $(19b + 10)$

Second Binomial = $(29p + 12)$

Form subtraction expression:

$$(19b + 10) - (29p + 12)$$

Open brackets and change signs of second binomial:

$$19b + 10 - 29p - 12$$

Arrange like terms together:

$$19b - 29p + 10 - 12$$

Subtract like terms and simplify:

$$19b - 29p - 2$$

Hence, $(19b + 10) - (29p + 12) = 19b - 29p - 2$

Example 5

Subtract: $(20y + 4) - (27y - 13)$

Given binomials are:

First Binomial = $(20y + 4)$

Second Binomial = $(27y - 13)$

Form subtraction expression:

$$(20y + 4) - (27y - 13)$$

Open brackets and change signs of second binomial:

$$20y + 4 - 27y + 13$$

Arrange like terms together:

$$20y - 27y + 4 + 13$$

Subtract like terms and simplify:

$$-7y + 17$$

Hence, $(20y + 4) - (27y - 13) = -7y + 17$

Example 6

Subtract: $(25b - 2) - (22b - 3)$

Given binomials are:

First Binomial = $(25b - 2)$

Second Binomial = $(22b - 3)$

Form subtraction expression:

$$(25b - 2) - (22b - 3)$$

Open brackets and change signs of second binomial:

$$25b - 2 - 22b + 3$$

Arrange like terms together:

$$25b - 22b - 2 + 3$$

Subtract like terms and simplify:

$$3b + 1$$

Hence, $(25b - 2) - (22b - 3) = 3b + 1$

Example 7

Subtract: $(22p - 15) - (22p + 4)$

Given binomials are:

First Binomial = $(22p - 15)$

Second Binomial = $(22p + 4)$

Form subtraction expression:

$$(22p - 15) - (22p + 4)$$

Open brackets and change signs of second binomial:

$$22p - 15 - 22p - 4$$

Arrange like terms together:

$$22p - 22p - 15 - 4$$

Subtract like terms and simplify:

$$0p - 19$$

$$\textbf{Hence, } (22p - 15) - (22p + 4) = 0p - 19$$

Example 8

$$\textbf{Subtract: } (6b - 9) - (9p - 13)$$

Given binomials are:

$$\text{First Binomial} = (6b - 9)$$

$$\text{Second Binomial} = (9p - 13)$$

Form subtraction expression:

$$(6b - 9) - (9p - 13)$$

Open brackets and change signs of second binomial:

$$6b - 9 - 9p + 13$$

Arrange like terms together:

$$6b - 9p - 9 + 13$$

Subtract like terms and simplify:

$$6b - 9p + 4$$

$$\textbf{Hence, } (6b - 9) - (9p - 13) = 6b - 9p + 4$$

Example 9

Subtract: $(7p - 9) - (21p - 15)$

Given binomials are:

First Binomial = $(7p - 9)$

Second Binomial = $(21p - 15)$

Form subtraction expression:

$$(7p - 9) - (21p - 15)$$

Open brackets and change signs of second binomial:

$$7p - 9 - 21p + 15$$

Arrange like terms together:

$$7p - 21p - 9 + 15$$

Subtract like terms and simplify:

$$-14p + 6$$

Hence, $(7p - 9) - (21p - 15) = -14p + 6$

Example 10

Subtract: $(29b - 3) - (20b - 6)$

Given binomials are:

First Binomial = $(29b - 3)$

Second Binomial = $(20b - 6)$

Form subtraction expression:

$$(29b - 3) - (20b - 6)$$

Open brackets and change signs of second binomial:

$$29b - 3 - 20b + 6$$

Arrange like terms together:

$$29b - 20b - 3 + 6$$

Subtract like terms and simplify:

$$9b + 3$$

Hence, $(29b - 3) - (20b - 6) = 9b + 3$

Example 11

Subtract: $(16m + 14) - (15m - 3)$

Given binomials are:

First Binomial = $(16m + 14)$

Second Binomial = $(15m - 3)$

Form subtraction expression:

$$(16m + 14) - (15m - 3)$$

Open brackets and change signs of second binomial:

$$16m + 14 - 15m + 3$$

Arrange like terms together:

$$16m - 15m + 14 + 3$$

Subtract like terms and simplify:

$$1m + 17$$

Hence, $(16m + 14) - (15m - 3) = 1m + 17$

Example 12

Subtract: $(24x + 5) - (25a - 3)$

Given binomials are:

First Binomial = $(24x + 5)$

Second Binomial = $(25a - 3)$

Form subtraction expression:

$$(24x + 5) - (25a - 3)$$

Open brackets and change signs of second binomial:

$$24x + 5 - 25a + 3$$

Arrange like terms together:

$$24x - 25a + 5 + 3$$

Subtract like terms and simplify:

$$24x - 25a + 8$$

Hence, $(24x + 5) - (25a - 3) = 24x - 25a + 8$

Example 13

Subtract: $(18y + 3) - (25a + 14)$

Given binomials are:

First Binomial = $(18y + 3)$

Second Binomial = $(25a + 14)$

Form subtraction expression:

$$(18y + 3) - (25a + 14)$$

Open brackets and change signs of second binomial:

$$18y + 3 - 25a - 14$$

Arrange like terms together:

$$18y - 25a + 3 - 14$$

Subtract like terms and simplify:

$$18y - 25a - 11$$

Hence, $(18y + 3) - (25a + 14) = 18y - 25a - 11$

Example 14

Subtract: $(15m + 6) - (29b + 7)$

Given binomials are:

First Binomial = $(15m + 6)$

Second Binomial = $(29b + 7)$

Form subtraction expression:

$(15m + 6) - (29b + 7)$

Open brackets and change signs of second binomial:

$15m + 6 - 29b - 7$

Arrange like terms together:

$15m - 29b + 6 - 7$

Subtract like terms and simplify:

$15m - 29b - 1$

Hence, $(15m + 6) - (29b + 7) = 15m - 29b - 1$

Example 15

Subtract: $(11x - 1) - (13x - 10)$

Given binomials are:

First Binomial = $(11x - 1)$

Second Binomial = $(13x - 10)$

Form subtraction expression:

$(11x - 1) - (13x - 10)$

Open brackets and change signs of second binomial:

$$11x - 1 - 13x + 10$$

Arrange like terms together:

$$11x - 13x - 1 + 10$$

Subtract like terms and simplify:

$$-2x + 9$$

Hence, $(11x - 1) - (13x - 10) = -2x + 9$

Example 16

Subtract: $(25m + 2) - (9p + 14)$

Given binomials are:

First Binomial = $(25m + 2)$

Second Binomial = $(9p + 14)$

Form subtraction expression:

$$(25m + 2) - (9p + 14)$$

Open brackets and change signs of second binomial:

$$25m + 2 - 9p - 14$$

Arrange like terms together:

$$25m - 9p + 2 - 14$$

Subtract like terms and simplify:

$$25m - 9p - 12$$

Hence, $(25m + 2) - (9p + 14) = 25m - 9p - 12$

Example 17

Subtract: $(19y + 13) - (13x + 12)$

Given binomials are:

First Binomial = $(19y + 13)$

Second Binomial = $(13x + 12)$

Form subtraction expression:

$$(19y + 13) - (13x + 12)$$

Open brackets and change signs of second binomial:

$$19y + 13 - 13x - 12$$

Arrange like terms together:

$$19y - 13x + 13 - 12$$

Subtract like terms and simplify:

$$19y - 13x + 1$$

Hence, $(19y + 13) - (13x + 12) = 19y - 13x + 1$

Example 18

Subtract: $(16a + 7) - (13a - 2)$

Given binomials are:

First Binomial = $(16a + 7)$

Second Binomial = $(13a - 2)$

Form subtraction expression:

$$(16a + 7) - (13a - 2)$$

Open brackets and change signs of second binomial:

$$16a + 7 - 13a + 2$$

Arrange like terms together:

$$16a - 13a + 7 + 2$$

Subtract like terms and simplify:

$$3a + 9$$

Hence, $(16a + 7) - (13a - 2) = 3a + 9$

Example 19

Subtract: $(12a - 8) - (30a + 11)$

Given binomials are:

First Binomial = $(12a - 8)$

Second Binomial = $(30a + 11)$

Form subtraction expression:

$$(12a - 8) - (30a + 11)$$

Open brackets and change signs of second binomial:

$$12a - 8 - 30a - 11$$

Arrange like terms together:

$$12a - 30a - 8 - 11$$

Subtract like terms and simplify:

$$-18a - 19$$

Hence, $(12a - 8) - (30a + 11) = -18a - 19$

Example 20

Subtract: $(22m + 6) - (7b - 12)$

Given binomials are:

First Binomial = $(22m + 6)$

Second Binomial = $(7b - 12)$

Form subtraction expression:

$$(22m + 6) - (7b - 12)$$

Open brackets and change signs of second binomial:

$$22m + 6 - 7b + 12$$

Arrange like terms together:

$$22m - 7b + 6 + 12$$

Subtract like terms and simplify:

$$22m - 7b + 18$$

Hence, $(22m + 6) - (7b - 12) = 22m - 7b + 18$