

Subtraction of Binomials Solved Examples

Example 1

Subtract: $(23y - 2) - (10p - 2)$

Given binomials are:

First Binomial = $(23y - 2)$

Second Binomial = $(10p - 2)$

Form subtraction expression:

$$(23y - 2) - (10p - 2)$$

Open brackets and change signs of second binomial:

$$23y - 2 - 10p + 2$$

Arrange like terms together:

$$23y - 10p - 2 + 2$$

Subtract like terms and simplify:

$$23y - 10p$$

Hence, $(23y - 2) - (10p - 2) = 23y - 10p$

Example 2

Subtract: $(16x - 3) - (16x - 3)$

Given binomials are:

First Binomial = $(16x - 3)$

Second Binomial = $(16x - 3)$

Form subtraction expression:

$$(16x - 3) - (16x - 3)$$

Open brackets and change signs of second binomial:

$$16x - 3 - 16x + 3$$

Arrange like terms together:

$$16x - 16x - 3 + 3$$

Subtract like terms and simplify:

$$0x$$

Hence, $(16x - 3) - (16x - 3) = 0x$

Example 3

Subtract: $(26y - 7) - (16x - 5)$

Given binomials are:

First Binomial = $(26y - 7)$

Second Binomial = $(16x - 5)$

Form subtraction expression:

$$(26y - 7) - (16x - 5)$$

Open brackets and change signs of second binomial:

$$26y - 7 - 16x + 5$$

Arrange like terms together:

$$26y - 16x - 7 + 5$$

Subtract like terms and simplify:

$$26y - 16x - 2$$

Hence, $(26y - 7) - (16x - 5) = 26y - 16x - 2$

Example 4

Subtract: $(8m - 12) - (26m + 12)$

Given binomials are:

$$\text{First Binomial} = (8m - 12)$$

$$\text{Second Binomial} = (26m + 12)$$

Form subtraction expression:

$$(8m - 12) - (26m + 12)$$

Open brackets and change signs of second binomial:

$$8m - 12 - 26m - 12$$

Arrange like terms together:

$$8m - 26m - 12 - 12$$

Subtract like terms and simplify:

$$-18m - 24$$

Hence, $(8m - 12) - (26m + 12) = -18m - 24$

Example 5

Subtract: $(7y + 8) - (15x - 2)$

Given binomials are:

$$\text{First Binomial} = (7y + 8)$$

$$\text{Second Binomial} = (15x - 2)$$

Form subtraction expression:

$$(7y + 8) - (15x - 2)$$

Open brackets and change signs of second binomial:

$$7y + 8 - 15x + 2$$

Arrange like terms together:

$$7y - 15x + 8 + 2$$

Subtract like terms and simplify:

$$7y - 15x + 10$$

Hence, $(7y + 8) - (15x - 2) = 7y - 15x + 10$

Example 6

Subtract: $(28a + 1) - (23a - 8)$

Given binomials are:

First Binomial = $(28a + 1)$

Second Binomial = $(23a - 8)$

Form subtraction expression:

$$(28a + 1) - (23a - 8)$$

Open brackets and change signs of second binomial:

$$28a + 1 - 23a + 8$$

Arrange like terms together:

$$28a - 23a + 1 + 8$$

Subtract like terms and simplify:

$$5a + 9$$

Hence, $(28a + 1) - (23a - 8) = 5a + 9$

Example 7

Subtract: $(18x - 10) - (8m - 10)$

Given binomials are:

First Binomial = $(18x - 10)$

Second Binomial = $(8m - 10)$

Form subtraction expression:

$$(18x - 10) - (8m - 10)$$

Open brackets and change signs of second binomial:

$$18x - 10 - 8m + 10$$

Arrange like terms together:

$$18x - 8m - 10 + 10$$

Subtract like terms and simplify:

$$18x - 8m$$

Hence, $(18x - 10) - (8m - 10) = 18x - 8m$

Example 8

Subtract: $(8m + 14) - (12m + 10)$

Given binomials are:

First Binomial = $(8m + 14)$

Second Binomial = $(12m + 10)$

Form subtraction expression:

$$(8m + 14) - (12m + 10)$$

Open brackets and change signs of second binomial:

$$8m + 14 - 12m - 10$$

Arrange like terms together:

$$8m - 12m + 14 - 10$$

Subtract like terms and simplify:

$$-4m + 4$$

Hence, $(8m + 14) - (12m + 10) = -4m + 4$

Example 9

Subtract: $(28y - 13) - (13y - 3)$

Given binomials are:

First Binomial = $(28y - 13)$

Second Binomial = $(13y - 3)$

Form subtraction expression:

$$(28y - 13) - (13y - 3)$$

Open brackets and change signs of second binomial:

$$28y - 13 - 13y + 3$$

Arrange like terms together:

$$28y - 13y - 13 + 3$$

Subtract like terms and simplify:

$$15y - 10$$

Hence, $(28y - 13) - (13y - 3) = 15y - 10$

Example 10

Subtract: $(10x - 8) - (25x + 1)$

Given binomials are:

First Binomial = $(10x - 8)$

Second Binomial = $(25x + 1)$

Form subtraction expression:

$$(10x - 8) - (25x + 1)$$

Open brackets and change signs of second binomial:

$$10x - 8 - 25x - 1$$

Arrange like terms together:

$$10x - 25x - 8 - 1$$

Subtract like terms and simplify:

$$-15x - 9$$

Hence, $(10x - 8) - (25x + 1) = -15x - 9$

Example 11

Subtract: $(28b - 5) - (7b + 7)$

Given binomials are:

First Binomial = $(28b - 5)$

Second Binomial = $(7b + 7)$

Form subtraction expression:

$$(28b - 5) - (7b + 7)$$

Open brackets and change signs of second binomial:

$$28b - 5 - 7b - 7$$

Arrange like terms together:

$$28b - 7b - 5 - 7$$

Subtract like terms and simplify:

$$21b - 12$$

Hence, $(28b - 5) - (7b + 7) = 21b - 12$

Example 12

Subtract: $(19p - 13) - (12a + 9)$

Given binomials are:

First Binomial = $(19p - 13)$

$$\text{Second Binomial} = (12a + 9)$$

Form subtraction expression:

$$(19p - 13) - (12a + 9)$$

Open brackets and change signs of second binomial:

$$19p - 13 - 12a - 9$$

Arrange like terms together:

$$19p - 12a - 13 - 9$$

Subtract like terms and simplify:

$$19p - 12a - 22$$

Hence, $(19p - 13) - (12a + 9) = 19p - 12a - 22$

Example 13

Subtract: $(19m + 13) - (12b - 5)$

Given binomials are:

$$\text{First Binomial} = (19m + 13)$$

$$\text{Second Binomial} = (12b - 5)$$

Form subtraction expression:

$$(19m + 13) - (12b - 5)$$

Open brackets and change signs of second binomial:

$$19m + 13 - 12b + 5$$

Arrange like terms together:

$$19m - 12b + 13 + 5$$

Subtract like terms and simplify:

$$19m - 12b + 18$$

Hence, $(19m + 13) - (12b - 5) = 19m - 12b + 18$

Example 14

Subtract: $(28b - 10) - (13b + 13)$

Given binomials are:

First Binomial = $(28b - 10)$

Second Binomial = $(13b + 13)$

Form subtraction expression:

$$(28b - 10) - (13b + 13)$$

Open brackets and change signs of second binomial:

$$28b - 10 - 13b - 13$$

Arrange like terms together:

$$28b - 13b - 10 - 13$$

Subtract like terms and simplify:

$$15b - 23$$

Hence, $(28b - 10) - (13b + 13) = 15b - 23$

Example 15

Subtract: $(30y - 12) - (16y + 5)$

Given binomials are:

First Binomial = $(30y - 12)$

Second Binomial = $(16y + 5)$

Form subtraction expression:

$$(30y - 12) - (16y + 5)$$

Open brackets and change signs of second binomial:

$$30y - 12 - 16y - 5$$

Arrange like terms together:

$$30y - 16y - 12 - 5$$

Subtract like terms and simplify:

$$14y - 17$$

Hence, $(30y - 12) - (16y + 5) = 14y - 17$

Example 16

Subtract: $(19b - 2) - (16b + 13)$

Given binomials are:

First Binomial = $(19b - 2)$

Second Binomial = $(16b + 13)$

Form subtraction expression:

$$(19b - 2) - (16b + 13)$$

Open brackets and change signs of second binomial:

$$19b - 2 - 16b - 13$$

Arrange like terms together:

$$19b - 16b - 2 - 13$$

Subtract like terms and simplify:

$$3b - 15$$

Hence, $(19b - 2) - (16b + 13) = 3b - 15$

Example 17

Subtract: $(18b + 13) - (11a - 11)$

Given binomials are:

First Binomial = $(18b + 13)$

Second Binomial = $(11a - 11)$

Form subtraction expression:

$$(18b + 13) - (11a - 11)$$

Open brackets and change signs of second binomial:

$$18b + 13 - 11a + 11$$

Arrange like terms together:

$$18b - 11a + 13 + 11$$

Subtract like terms and simplify:

$$18b - 11a + 24$$

Hence, $(18b + 13) - (11a - 11) = 18b - 11a + 24$

Example 18

Subtract: $(30y + 15) - (20b - 12)$

Given binomials are:

First Binomial = $(30y + 15)$

Second Binomial = $(20b - 12)$

Form subtraction expression:

$$(30y + 15) - (20b - 12)$$

Open brackets and change signs of second binomial:

$$30y + 15 - 20b + 12$$

Arrange like terms together:

$$30y - 20b + 15 + 12$$

Subtract like terms and simplify:

$$30y - 20b + 27$$

Hence, $(30y + 15) - (20b - 12) = 30y - 20b + 27$

Example 19

Subtract: $(20a - 10) - (16y - 7)$

Given binomials are:

First Binomial = $(20a - 10)$

Second Binomial = $(16y - 7)$

Form subtraction expression:

$$(20a - 10) - (16y - 7)$$

Open brackets and change signs of second binomial:

$$20a - 10 - 16y + 7$$

Arrange like terms together:

$$20a - 16y - 10 + 7$$

Subtract like terms and simplify:

$$20a - 16y - 3$$

Hence, $(20a - 10) - (16y - 7) = 20a - 16y - 3$

Example 20

Subtract: $(6b - 15) - (17b - 15)$

Given binomials are:

First Binomial = $(6b - 15)$

Second Binomial = $(17b - 15)$

Form subtraction expression:

$$(6b - 15) - (17b - 15)$$

Open brackets and change signs of second binomial:

$$6b - 15 - 17b + 15$$

Arrange like terms together:

$$6b - 17b - 15 + 15$$

Subtract like terms and simplify:

$$-11b$$

Hence, $(6b - 15) - (17b - 15) = -11b$