

Subtraction of Binomials Solved Examples

Example 1

Subtract: $(17m - 2) - (20m + 5)$

Given binomials are:

First Binomial = $(17m - 2)$

Second Binomial = $(20m + 5)$

Form subtraction expression:

$$(17m - 2) - (20m + 5)$$

Open brackets and change signs of second binomial:

$$17m - 2 - 20m - 5$$

Arrange like terms together:

$$17m - 20m - 2 - 5$$

Subtract like terms and simplify:

$$-3m - 7$$

Hence, $(17m - 2) - (20m + 5) = -3m - 7$

Example 2

Subtract: $(5x + 15) - (6p + 1)$

Given binomials are:

First Binomial = $(5x + 15)$

Second Binomial = $(6p + 1)$

Form subtraction expression:

$$(5x + 15) - (6p + 1)$$

Open brackets and change signs of second binomial:

$$5x + 15 - 6p - 1$$

Arrange like terms together:

$$5x - 6p + 15 - 1$$

Subtract like terms and simplify:

$$5x - 6p + 14$$

Hence, $(5x + 15) - (6p + 1) = 5x - 6p + 14$

Example 3

Subtract: $(17m - 5) - (20m - 7)$

Given binomials are:

First Binomial = $(17m - 5)$

Second Binomial = $(20m - 7)$

Form subtraction expression:

$$(17m - 5) - (20m - 7)$$

Open brackets and change signs of second binomial:

$$17m - 5 - 20m + 7$$

Arrange like terms together:

$$17m - 20m - 5 + 7$$

Subtract like terms and simplify:

$$-3m + 2$$

Hence, $(17m - 5) - (20m - 7) = -3m + 2$

Example 4

Subtract: $(11p - 12) - (30x + 14)$

Given binomials are:

First Binomial = $(11p - 12)$

Second Binomial = $(30x + 14)$

Form subtraction expression:

$$(11p - 12) - (30x + 14)$$

Open brackets and change signs of second binomial:

$$11p - 12 - 30x - 14$$

Arrange like terms together:

$$11p - 30x - 12 - 14$$

Subtract like terms and simplify:

$$11p - 30x - 26$$

Hence, $(11p - 12) - (30x + 14) = 11p - 30x - 26$

Example 5

Subtract: $(29a + 10) - (16a - 5)$

Given binomials are:

First Binomial = $(29a + 10)$

Second Binomial = $(16a - 5)$

Form subtraction expression:

$$(29a + 10) - (16a - 5)$$

Open brackets and change signs of second binomial:

$$29a + 10 - 16a + 5$$

Arrange like terms together:

$$29a - 16a + 10 + 5$$

Subtract like terms and simplify:

$$13a + 15$$

Hence, $(29a + 10) - (16a - 5) = 13a + 15$

Example 6

Subtract: $(30a + 7) - (5a - 8)$

Given binomials are:

First Binomial = $(30a + 7)$

Second Binomial = $(5a - 8)$

Form subtraction expression:

$$(30a + 7) - (5a - 8)$$

Open brackets and change signs of second binomial:

$$30a + 7 - 5a + 8$$

Arrange like terms together:

$$30a - 5a + 7 + 8$$

Subtract like terms and simplify:

$$25a + 15$$

Hence, $(30a + 7) - (5a - 8) = 25a + 15$

Example 7

Subtract: $(27x - 9) - (23x - 8)$

Given binomials are:

First Binomial = $(27x - 9)$

Second Binomial = $(23x - 8)$

Form subtraction expression:

$$(27x - 9) - (23x - 8)$$

Open brackets and change signs of second binomial:

$$27x - 9 - 23x + 8$$

Arrange like terms together:

$$27x - 23x - 9 + 8$$

Subtract like terms and simplify:

$$4x - 1$$

Hence, $(27x - 9) - (23x - 8) = 4x - 1$

Example 8

Subtract: $(27b - 8) - (15m - 12)$

Given binomials are:

First Binomial = $(27b - 8)$

Second Binomial = $(15m - 12)$

Form subtraction expression:

$$(27b - 8) - (15m - 12)$$

Open brackets and change signs of second binomial:

$$27b - 8 - 15m + 12$$

Arrange like terms together:

$$27b - 15m - 8 + 12$$

Subtract like terms and simplify:

$$27b - 15m + 4$$

Hence, $(27b - 8) - (15m - 12) = 27b - 15m + 4$

Example 9

Subtract: $(5a - 13) - (20a + 5)$

Given binomials are:

First Binomial = $(5a - 13)$

Second Binomial = $(20a + 5)$

Form subtraction expression:

$$(5a - 13) - (20a + 5)$$

Open brackets and change signs of second binomial:

$$5a - 13 - 20a - 5$$

Arrange like terms together:

$$5a - 20a - 13 - 5$$

Subtract like terms and simplify:

$$-15a - 18$$

Hence, $(5a - 13) - (20a + 5) = -15a - 18$

Example 10

Subtract: $(25p + 6) - (13p - 6)$

Given binomials are:

First Binomial = $(25p + 6)$

Second Binomial = $(13p - 6)$

Form subtraction expression:

$$(25p + 6) - (13p - 6)$$

Open brackets and change signs of second binomial:

$$25p + 6 - 13p + 6$$

Arrange like terms together:

$$25p - 13p + 6 + 6$$

Subtract like terms and simplify:

$$12p + 12$$

Hence, $(25p + 6) - (13p - 6) = 12p + 12$

Example 11

Subtract: $(22m + 6) - (17b + 11)$

Given binomials are:

First Binomial = $(22m + 6)$

Second Binomial = $(17b + 11)$

Form subtraction expression:

$$(22m + 6) - (17b + 11)$$

Open brackets and change signs of second binomial:

$$22m + 6 - 17b - 11$$

Arrange like terms together:

$$22m - 17b + 6 - 11$$

Subtract like terms and simplify:

$$22m - 17b - 5$$

Hence, $(22m + 6) - (17b + 11) = 22m - 17b - 5$

Example 12

Subtract: $(7b + 10) - (12b - 7)$

Given binomials are:

First Binomial = $(7b + 10)$

Second Binomial = $(12b - 7)$

Form subtraction expression:

$$(7b + 10) - (12b - 7)$$

Open brackets and change signs of second binomial:

$$7b + 10 - 12b + 7$$

Arrange like terms together:

$$7b - 12b + 10 + 7$$

Subtract like terms and simplify:

$$-5b + 17$$

Hence, $(7b + 10) - (12b - 7) = -5b + 17$

Example 13

Subtract: $(7p - 10) - (28p - 11)$

Given binomials are:

First Binomial = $(7p - 10)$

Second Binomial = $(28p - 11)$

Form subtraction expression:

$$(7p - 10) - (28p - 11)$$

Open brackets and change signs of second binomial:

$$7p - 10 - 28p + 11$$

Arrange like terms together:

$$7p - 28p - 10 + 11$$

Subtract like terms and simplify:

$$-21p + 1$$

Hence, $(7p - 10) - (28p - 11) = -21p + 1$

Example 14

Subtract: $(22a + 10) - (26a - 13)$

Given binomials are:

First Binomial = $(22a + 10)$

Second Binomial = $(26a - 13)$

Form subtraction expression:

$$(22a + 10) - (26a - 13)$$

Open brackets and change signs of second binomial:

$$22a + 10 - 26a + 13$$

Arrange like terms together:

$$22a - 26a + 10 + 13$$

Subtract like terms and simplify:

$$-4a + 23$$

Hence, $(22a + 10) - (26a - 13) = -4a + 23$

Example 15

Subtract: $(11p + 10) - (5y - 14)$

Given binomials are:

First Binomial = $(11p + 10)$

Second Binomial = $(5y - 14)$

Form subtraction expression:

$$(11p + 10) - (5y - 14)$$

Open brackets and change signs of second binomial:

$$11p + 10 - 5y + 14$$

Arrange like terms together:

$$11p - 5y + 10 + 14$$

Subtract like terms and simplify:

$$11p - 5y + 24$$

Hence, $(11p + 10) - (5y - 14) = 11p - 5y + 24$

Example 16

Subtract: $(6a + 4) - (17a + 8)$

Given binomials are:

First Binomial = $(6a + 4)$

Second Binomial = $(17a + 8)$

Form subtraction expression:

$$(6a + 4) - (17a + 8)$$

Open brackets and change signs of second binomial:

$$6a + 4 - 17a - 8$$

Arrange like terms together:

$$6a - 17a + 4 - 8$$

Subtract like terms and simplify:

$$-11a - 4$$

Hence, $(6a + 4) - (17a + 8) = -11a - 4$

Example 17

Subtract: $(12p + 9) - (24m + 2)$

Given binomials are:

First Binomial = $(12p + 9)$

Second Binomial = $(24m + 2)$

Form subtraction expression:

$$(12p + 9) - (24m + 2)$$

Open brackets and change signs of second binomial:

$$12p + 9 - 24m - 2$$

Arrange like terms together:

$$12p - 24m + 9 - 2$$

Subtract like terms and simplify:

$$12p - 24m + 7$$

Hence, $(12p + 9) - (24m + 2) = 12p - 24m + 7$

Example 18

Subtract: $(17m + 12) - (23m + 4)$

Given binomials are:

First Binomial = $(17m + 12)$

Second Binomial = $(23m + 4)$

Form subtraction expression:

$$(17m + 12) - (23m + 4)$$

Open brackets and change signs of second binomial:

$$17m + 12 - 23m - 4$$

Arrange like terms together:

$$17m - 23m + 12 - 4$$

Subtract like terms and simplify:

$$-6m + 8$$

Hence, $(17m + 12) - (23m + 4) = -6m + 8$

Example 19

Subtract: $(26p + 7) - (29m + 13)$

Given binomials are:

First Binomial = $(26p + 7)$

Second Binomial = $(29m + 13)$

Form subtraction expression:

$$(26p + 7) - (29m + 13)$$

Open brackets and change signs of second binomial:

$$26p + 7 - 29m - 13$$

Arrange like terms together:

$$26p - 29m + 7 - 13$$

Subtract like terms and simplify:

$$26p - 29m - 6$$

Hence, $(26p + 7) - (29m + 13) = 26p - 29m - 6$

Example 20

Subtract: $(8a - 13) - (28y + 11)$

Given binomials are:

First Binomial = $(8a - 13)$

Second Binomial = $(28y + 11)$

Form subtraction expression:

$$(8a - 13) - (28y + 11)$$

Open brackets and change signs of second binomial:

$$8a - 13 - 28y - 11$$

Arrange like terms together:

$$8a - 28y - 13 - 11$$

Subtract like terms and simplify:

$$8a - 28y - 24$$

Hence, $(8a - 13) - (28y + 11) = 8a - 28y - 24$