

すきプリ 中学数学

## 式の計算【加法減法】

## もくじ

同類項をまとめる

多項式の加法減法 1

多項式の加法減法 2

## 問題

次の式の同類項をまとめましょう。

1

$$3a^2 - 9a + 2a^2$$

2

$$-6a^2 + 7a + 2a - 19a^2$$

3

$$-18a + a - 8b$$

4

$$17b^2 + 14b + 13b + 2b^2$$

5

$$19a + b - 9a$$

6

$$17a^2 - 11a - 16a + 4a^2$$

7

$$-8b^2 + 10b^2 - 17b$$

8

$$-6x^2 - 13x - 17x^2 + 5x$$

9

$$-16y^2 + 7y + 7y + 13y^2$$

10

$$-4a^2 + 15a - 19a^2 - 19a$$

1

$$\begin{aligned}
& 3a^2 - 9a + 2a^2 \\
&= 3a^2 + 2a^2 - 9a \\
&= (3 + 2)a^2 - 9a \\
&= 5a^2 - 9a
\end{aligned}$$

2

$$\begin{aligned}
& -6a^2 + 7a + 2a - 19a^2 \\
&= -6a^2 - 19a^2 + 7a + 2a \\
&= (-6 - 19)a^2 + (7 + 2)a \\
&= -25a^2 + 9a
\end{aligned}$$

3

$$\begin{aligned}
& -18a + a - 8b \\
&= (-18 + 1)a - 8b \\
&= -17a - 8b
\end{aligned}$$

4

$$\begin{aligned}
& 17b^2 + 14b + 13b + 2b^2 \\
&= 17b^2 + 2b^2 + 14b + 13b \\
&= (17 + 2)b^2 + (14 + 13)b \\
&= 19b^2 + 27b
\end{aligned}$$

5

$$\begin{aligned}
& 19a + b - 9a \\
&= 19a - 9a + b \\
&= (19 - 9)a + b \\
&= 10a + b
\end{aligned}$$

6

$$\begin{aligned}
& 17a^2 - 11a - 16a + 4a^2 \\
&= 17a^2 + 4a^2 - 11a - 16a \\
&= (17 + 4)a^2 + (-11 - 16)a \\
&= 21a^2 - 27a
\end{aligned}$$

7

$$\begin{aligned}
& -8b^2 + 10b^2 - 17b \\
&= (-8 + 10)b^2 - 17b \\
&= 2b^2 - 17b
\end{aligned}$$

8

$$\begin{aligned}
& -6x^2 - 13x - 17x^2 + 5x \\
&= -6x^2 - 17x^2 - 13x + 5x \\
&= (-6 - 17)x^2 + (-13 + 5)x \\
&= -23x^2 - 8x
\end{aligned}$$

9

$$\begin{aligned}
& -16y^2 + 7y + 7y + 13y^2 \\
&= -16y^2 + 13y^2 + 7y + 7y \\
&= (-16 + 13)y^2 + (7 + 7)y \\
&= -3y^2 + 14y
\end{aligned}$$

10

$$\begin{aligned}
& -4a^2 + 15a - 19a^2 - 19a \\
&= -4a^2 - 19a^2 + 15a - 19a \\
&= (-4 - 19)a^2 + (15 - 19)a \\
&= -23a^2 - 4a
\end{aligned}$$

1

$$16a^2 - 16a + 5a - 9a^2$$

2

$$-19b^2 - 10b - 6b^2$$

3

$$6b^2 - 4b - 6b^2$$

4

$$-13a + 20a + 10b$$

5

$$-3x + 14y - 8y + 9x$$

6

$$y^2 - 5y^2 + 14y$$

7

$$16a^2 + 4a^2 - 8a$$

8

$$-14x^2 - 5x + 12x^2 - 5x$$

9

$$-17b^2 - 18b^2 + 12b$$

10

$$15x - 13y - 8x$$

1

$$\begin{aligned}
& 16a^2 - 16a + 5a - 9a^2 \\
&= 16a^2 - 9a^2 - 16a + 5a \\
&= (16 - 9)a^2 + (-16 + 5)a \\
&= 7a^2 - 11a
\end{aligned}$$

2

$$\begin{aligned}
& -19b^2 - 10b - 6b^2 \\
&= -19b^2 - 6b^2 - 10b \\
&= (-19 - 6)b^2 - 10b \\
&= -25b^2 - 10b
\end{aligned}$$

3

$$\begin{aligned}
& 6b^2 - 4b - 6b^2 \\
&= 6b^2 - 6b^2 - 4b \\
&= (6 - 6)b^2 - 4b \\
&= -4b
\end{aligned}$$

4

$$\begin{aligned}
& -13a + 20a + 10b \\
&= (-13 + 20)a + 10b \\
&= 7a + 10b
\end{aligned}$$

5

$$\begin{aligned}
& -3x + 14y - 8y + 9x \\
&= -3x + 9x + 14y - 8y \\
&= (-3 + 9)x + (14 - 8)y \\
&= 6x + 6y
\end{aligned}$$

6

$$\begin{aligned}
& y^2 - 5y^2 + 14y \\
&= (1 - 5)y^2 + 14y \\
&= -4y^2 + 14y
\end{aligned}$$

7

$$\begin{aligned}
& 16a^2 + 4a^2 - 8a \\
&= (16 + 4)a^2 - 8a \\
&= 20a^2 - 8a
\end{aligned}$$

8

$$\begin{aligned}
& -14x^2 - 5x + 12x^2 - 5x \\
&= -14x^2 + 12x^2 - 5x - 5x \\
&= (-14 + 12)x^2 + (-5 - 5)x \\
&= -2x^2 - 10x
\end{aligned}$$

9

$$\begin{aligned}
& -17b^2 - 18b^2 + 12b \\
&= (-17 - 18)b^2 + 12b \\
&= -35b^2 + 12b
\end{aligned}$$

10

$$\begin{aligned}
& 15x - 13y - 8x \\
&= 15x - 8x - 13y \\
&= (15 - 8)x - 13y \\
&= 7x - 13y
\end{aligned}$$

1

$$4x^2 - 11x^2 - 9x$$

2

$$3x - 10y + 13x$$

3

$$20a^2 + 18a - 5a^2$$

4

$$-7a - 15a + 7b$$

5

$$8b^2 - 9b^2 - 19b$$

6

$$-10a + 6b - 4b + 3a$$

7

$$-4a - 14b - 19b - 13a$$

8

$$-12a^2 + 8a + 19a + 3a^2$$

9

$$-20b^2 - 7b - 8b + 2b^2$$

10

$$12a^2 + 12a - 13a - 3a^2$$



1

$$\begin{aligned}
 & 4x^2 - 11x^2 - 9x \\
 &= (4 - 11)x^2 - 9x \\
 &= -7x^2 - 9x
 \end{aligned}$$

2

$$\begin{aligned}
 & 3x - 10y + 13x \\
 &= 3x + 13x - 10y \\
 &= (3 + 13)x - 10y \\
 &= 16x - 10y
 \end{aligned}$$

3

$$\begin{aligned}
 & 20a^2 + 18a - 5a^2 \\
 &= 20a^2 - 5a^2 + 18a \\
 &= (20 - 5)a^2 + 18a \\
 &= 15a^2 + 18a
 \end{aligned}$$

4

$$\begin{aligned}
 & -7a - 15a + 7b \\
 &= (-7 - 15)a + 7b \\
 &= -22a + 7b
 \end{aligned}$$

5

$$\begin{aligned}
 & 8b^2 - 9b^2 - 19b \\
 &= (8 - 9)b^2 - 19b \\
 &= -b^2 - 19b
 \end{aligned}$$

6

$$\begin{aligned}
 & -10a + 6b - 4b + 3a \\
 &= -10a + 3a + 6b - 4b \\
 &= (-10 + 3)a + (6 - 4)b \\
 &= -7a + 2b
 \end{aligned}$$

7

$$\begin{aligned}
 & -4a - 14b - 19b - 13a \\
 &= -4a - 13a - 14b - 19b \\
 &= (-4 - 13)a + (-14 - 19)b \\
 &= -17a - 33b
 \end{aligned}$$

8

$$\begin{aligned}
 & -12a^2 + 8a + 19a + 3a^2 \\
 &= -12a^2 + 3a^2 + 8a + 19a \\
 &= (-12 + 3)a^2 + (8 + 19)a \\
 &= -9a^2 + 27a
 \end{aligned}$$

9

$$\begin{aligned}
 & -20b^2 - 7b - 8b + 2b^2 \\
 &= -20b^2 + 2b^2 - 7b - 8b \\
 &= (-20 + 2)b^2 + (-7 - 8)b \\
 &= -18b^2 - 15b
 \end{aligned}$$

10

$$\begin{aligned}
 & 12a^2 + 12a - 13a - 3a^2 \\
 &= 12a^2 - 3a^2 + 12a - 13a \\
 &= (12 - 3)a^2 + (12 - 13)a \\
 &= 9a^2 - a
 \end{aligned}$$

1

$$6x^2 + 13x + 12x + x^2$$

2

$$4x + 14y + 15x$$

3

$$2x^2 + 16x - 5x^2$$

4

$$-10a^2 + 12a - 13a^2 + 4a$$

5

$$-8x^2 - 13x + 13x + 7x^2$$

6

$$10x^2 - 7x^2 - 14x$$

7

$$18b^2 - 14b - 14b^2 - 14b$$

8

$$13a^2 + 16a + 6a^2$$

9

$$-13x + 2y + 18x$$

10

$$-14a - 13a + 16b$$

1

$$\begin{aligned}
& 6x^2 + 13x + 12x + x^2 \\
&= 6x^2 + x^2 + 13x + 12x \\
&= (6 + 1)x^2 + (13 + 12)x \\
&= 7x^2 + 25x
\end{aligned}$$

2

$$\begin{aligned}
& 4x + 14y + 15x \\
&= 4x + 15x + 14y \\
&= (4 + 15)x + 14y \\
&= 19x + 14y
\end{aligned}$$

3

$$\begin{aligned}
& 2x^2 + 16x - 5x^2 \\
&= 2x^2 - 5x^2 + 16x \\
&= (2 - 5)x^2 + 16x \\
&= -3x^2 + 16x
\end{aligned}$$

4

$$\begin{aligned}
& -10a^2 + 12a - 13a^2 + 4a \\
&= -10a^2 - 13a^2 + 12a + 4a \\
&= (-10 - 13)a^2 + (12 + 4)a \\
&= -23a^2 + 16a
\end{aligned}$$

5

$$\begin{aligned}
& -8x^2 - 13x + 13x + 7x^2 \\
&= -8x^2 + 7x^2 - 13x + 13x \\
&= (-8 + 7)x^2 + (-13 + 13)x \\
&= -x^2
\end{aligned}$$

6

$$\begin{aligned}
& 10x^2 - 7x^2 - 14x \\
&= (10 - 7)x^2 - 14x \\
&= 3x^2 - 14x
\end{aligned}$$

7

$$\begin{aligned}
& 18b^2 - 14b - 14b^2 - 14b \\
&= 18b^2 - 14b^2 - 14b - 14b \\
&= (18 - 14)b^2 + (-14 - 14)b \\
&= 4b^2 - 28b
\end{aligned}$$

8

$$\begin{aligned}
& 13a^2 + 16a + 6a^2 \\
&= 13a^2 + 6a^2 + 16a \\
&= (13 + 6)a^2 + 16a \\
&= 19a^2 + 16a
\end{aligned}$$

9

$$\begin{aligned}
& -13x + 2y + 18x \\
&= -13x + 18x + 2y \\
&= (-13 + 18)x + 2y \\
&= 5x + 2y
\end{aligned}$$

10

$$\begin{aligned}
& -14a - 13a + 16b \\
&= (-14 - 13)a + 16b \\
&= -27a + 16b
\end{aligned}$$

1

$$3y^2 + 2y - 7y^2$$

2

$$18b^2 + 11b - 19b^2 + 20b$$

3

$$-4y^2 - 20y - 3y - 3y^2$$

4

$$17y^2 + 17y - 9y + 5y^2$$

5

$$18b^2 + 6b + 6b - 10b^2$$

6

$$-16x^2 - 17x - 19x - 13x^2$$

7

$$-8a + 3b + 7a + 11b$$

8

$$20a + a + 16b$$

9

$$11a^2 - 13a + 10a^2$$

10

$$9a^2 - 16a - a^2 + 2a$$

1

$$\begin{aligned}
 & 3y^2 + 2y - 7y^2 \\
 &= 3y^2 - 7y^2 + 2y \\
 &= (3 - 7)y^2 + 2y \\
 &= -4y^2 + 2y
 \end{aligned}$$

2

$$\begin{aligned}
 & 18b^2 + 11b - 19b^2 + 20b \\
 &= 18b^2 - 19b^2 + 11b + 20b \\
 &= (18 - 19)b^2 + (11 + 20)b \\
 &= -b^2 + 31b
 \end{aligned}$$

3

$$\begin{aligned}
 & -4y^2 - 20y - 3y - 3y^2 \\
 &= -4y^2 - 3y^2 - 20y - 3y \\
 &= (-4 - 3)y^2 + (-20 - 3)y \\
 &= -7y^2 - 23y
 \end{aligned}$$

4

$$\begin{aligned}
 & 17y^2 + 17y - 9y + 5y^2 \\
 &= 17y^2 + 5y^2 + 17y - 9y \\
 &= (17 + 5)y^2 + (17 - 9)y \\
 &= 22y^2 + 8y
 \end{aligned}$$

5

$$\begin{aligned}
 & 18b^2 + 6b + 6b - 10b^2 \\
 &= 18b^2 - 10b^2 + 6b + 6b \\
 &= (18 - 10)b^2 + (6 + 6)b \\
 &= 8b^2 + 12b
 \end{aligned}$$

6

$$\begin{aligned}
 & -16x^2 - 17x - 19x - 13x^2 \\
 &= -16x^2 - 13x^2 - 17x - 19x \\
 &= (-16 - 13)x^2 + (-17 - 19)x \\
 &= -29x^2 - 36x
 \end{aligned}$$

7

$$\begin{aligned}
 & -8a + 3b + 7a + 11b \\
 &= -8a + 7a + 3b + 11b \\
 &= (-8 + 7)a + (3 + 11)b \\
 &= -a + 14b
 \end{aligned}$$

8

$$\begin{aligned}
 & 20a + a + 16b \\
 &= (20 + 1)a + 16b \\
 &= 21a + 16b
 \end{aligned}$$

9

$$\begin{aligned}
 & 11a^2 - 13a + 10a^2 \\
 &= 11a^2 + 10a^2 - 13a \\
 &= (11 + 10)a^2 - 13a \\
 &= 21a^2 - 13a
 \end{aligned}$$

10

$$\begin{aligned}
 & 9a^2 - 16a - a^2 + 2a \\
 &= 9a^2 - a^2 - 16a + 2a \\
 &= (9 - 1)a^2 + (-16 + 2)a \\
 &= 8a^2 - 14a
 \end{aligned}$$

1

$$15a - 18b - 3a$$

2

$$-12x^2 + 3x + 2x^2 - 8x$$

3

$$-6b^2 + 17b^2 - 3b$$

4

$$-x^2 - 16x - 5x - 7x^2$$

5

$$5x - 11y - 11x - 2y$$

6

$$13a + 5b + 17a$$

7

$$19a + 9b - 4b - 3a$$

8

$$-4a^2 + 6a - 12a^2 + 19a$$

9

$$9x + 3y + 10y - 20x$$

10

$$-12y^2 + 6y + 14y - 16y^2$$

1

$$\begin{aligned}
 & 15a - 18b - 3a \\
 &= 15a - 3a - 18b \\
 &= (15 - 3)a - 18b \\
 &= 12a - 18b
 \end{aligned}$$

2

$$\begin{aligned}
 & -12x^2 + 3x + 2x^2 - 8x \\
 &= -12x^2 + 2x^2 + 3x - 8x \\
 &= (-12 + 2)x^2 + (3 - 8)x \\
 &= -10x^2 - 5x
 \end{aligned}$$

3

$$\begin{aligned}
 & -6b^2 + 17b^2 - 3b \\
 &= (-6 + 17)b^2 - 3b \\
 &= 11b^2 - 3b
 \end{aligned}$$

4

$$\begin{aligned}
 & -x^2 - 16x - 5x - 7x^2 \\
 &= -x^2 - 7x^2 - 16x - 5x \\
 &= (-1 - 7)x^2 + (-16 - 5)x \\
 &= -8x^2 - 21x
 \end{aligned}$$

5

$$\begin{aligned}
 & 5x - 11y - 11x - 2y \\
 &= 5x - 11x - 11y - 2y \\
 &= (5 - 11)x + (-11 - 2)y \\
 &= -6x - 13y
 \end{aligned}$$

6

$$\begin{aligned}
 & 13a + 5b + 17a \\
 &= 13a + 17a + 5b \\
 &= (13 + 17)a + 5b \\
 &= 30a + 5b
 \end{aligned}$$

7

$$\begin{aligned}
 & 19a + 9b - 4b - 3a \\
 &= 19a - 3a + 9b - 4b \\
 &= (19 - 3)a + (9 - 4)b \\
 &= 16a + 5b
 \end{aligned}$$

8

$$\begin{aligned}
 & -4a^2 + 6a - 12a^2 + 19a \\
 &= -4a^2 - 12a^2 + 6a + 19a \\
 &= (-4 - 12)a^2 + (6 + 19)a \\
 &= -16a^2 + 25a
 \end{aligned}$$

9

$$\begin{aligned}
 & 9x + 3y + 10y - 20x \\
 &= 9x - 20x + 3y + 10y \\
 &= (9 - 20)x + (3 + 10)y \\
 &= -11x + 13y
 \end{aligned}$$

10

$$\begin{aligned}
 & -12y^2 + 6y + 14y - 16y^2 \\
 &= -12y^2 - 16y^2 + 6y + 14y \\
 &= (-12 - 16)y^2 + (6 + 14)y \\
 &= -28y^2 + 20y
 \end{aligned}$$

1

$$-13x^2 - 17x + 5x + 9x^2$$

2

$$-8b^2 - 16b - 17b^2$$

3

$$17a - 15b + 9a$$

4

$$-3a^2 + 13a - 4a^2$$

5

$$-7b^2 - 14b - 19b^2 - 4b$$

6

$$15x - 8y - 11x$$

7

$$13a - 3b - 8a + 9b$$

8

$$-18a + 8b + 3a + b$$

9

$$-14y^2 + 9y - 7y^2$$

10

$$-11y^2 - 2y + 18y + 11y^2$$



1

$$\begin{aligned}
& -13x^2 - 17x + 5x + 9x^2 \\
&= -13x^2 + 9x^2 - 17x + 5x \\
&= (-13 + 9)x^2 + (-17 + 5)x \\
&= -4x^2 - 12x
\end{aligned}$$

2

$$\begin{aligned}
& -8b^2 - 16b - 17b^2 \\
&= -8b^2 - 17b^2 - 16b \\
&= (-8 - 17)b^2 - 16b \\
&= -25b^2 - 16b
\end{aligned}$$

3

$$\begin{aligned}
& 17a - 15b + 9a \\
&= 17a + 9a - 15b \\
&= (17 + 9)a - 15b \\
&= 26a - 15b
\end{aligned}$$

4

$$\begin{aligned}
& -3a^2 + 13a - 4a^2 \\
&= -3a^2 - 4a^2 + 13a \\
&= (-3 - 4)a^2 + 13a \\
&= -7a^2 + 13a
\end{aligned}$$

5

$$\begin{aligned}
& -7b^2 - 14b - 19b^2 - 4b \\
&= -7b^2 - 19b^2 - 14b - 4b \\
&= (-7 - 19)b^2 + (-14 - 4)b \\
&= -26b^2 - 18b
\end{aligned}$$

6

$$\begin{aligned}
& 15x - 8y - 11x \\
&= 15x - 11x - 8y \\
&= (15 - 11)x - 8y \\
&= 4x - 8y
\end{aligned}$$

7

$$\begin{aligned}
& 13a - 3b - 8a + 9b \\
&= 13a - 8a - 3b + 9b \\
&= (13 - 8)a + (-3 + 9)b \\
&= 5a + 6b
\end{aligned}$$

8

$$\begin{aligned}
& -18a + 8b + 3a + b \\
&= -18a + 3a + 8b + b \\
&= (-18 + 3)a + (8 + 1)b \\
&= -15a + 9b
\end{aligned}$$

9

$$\begin{aligned}
& -14y^2 + 9y - 7y^2 \\
&= -14y^2 - 7y^2 + 9y \\
&= (-14 - 7)y^2 + 9y \\
&= -21y^2 + 9y
\end{aligned}$$

10

$$\begin{aligned}
& -11y^2 - 2y + 18y + 11y^2 \\
&= -11y^2 + 11y^2 - 2y + 18y \\
&= (-11 + 11)y^2 + (-2 + 18)y \\
&= 16y
\end{aligned}$$

1

$$-18b^2 + 10b - 4b + 6b^2$$

2

$$-13b^2 - 9b + 11b + 14b^2$$

3

$$16a + 7b - 10b - 19a$$

4

$$-17y^2 - 10y + 6y - 19y^2$$

5

$$19a - 9b - 2b + 17a$$

6

$$8b^2 + 14b^2 + 2b$$

7

$$11x^2 - 13x^2 - 15x$$

8

$$7a - 6b + 9b - 13a$$

9

$$13y^2 - 8y - 17y^2 - 2y$$

10

$$-16y^2 + y - 12y - 18y^2$$

1

$$\begin{aligned}
& -18b^2 + 10b - 4b + 6b^2 \\
&= -18b^2 + 6b^2 + 10b - 4b \\
&= (-18 + 6)b^2 + (10 - 4)b \\
&= -12b^2 + 6b
\end{aligned}$$

2

$$\begin{aligned}
& -13b^2 - 9b + 11b + 14b^2 \\
&= -13b^2 + 14b^2 - 9b + 11b \\
&= (-13 + 14)b^2 + (-9 + 11)b \\
&= b^2 + 2b
\end{aligned}$$

3

$$\begin{aligned}
& 16a + 7b - 10b - 19a \\
&= 16a - 19a + 7b - 10b \\
&= (16 - 19)a + (7 - 10)b \\
&= -3a - 3b
\end{aligned}$$

4

$$\begin{aligned}
& -17y^2 - 10y + 6y - 19y^2 \\
&= -17y^2 - 19y^2 - 10y + 6y \\
&= (-17 - 19)y^2 + (-10 + 6)y \\
&= -36y^2 - 4y
\end{aligned}$$

5

$$\begin{aligned}
& 19a - 9b - 2b + 17a \\
&= 19a + 17a - 9b - 2b \\
&= (19 + 17)a + (-9 - 2)b \\
&= 36a - 11b
\end{aligned}$$

6

$$\begin{aligned}
& 8b^2 + 14b^2 + 2b \\
&= (8 + 14)b^2 + 2b \\
&= 22b^2 + 2b
\end{aligned}$$

7

$$\begin{aligned}
& 11x^2 - 13x^2 - 15x \\
&= (11 - 13)x^2 - 15x \\
&= -2x^2 - 15x
\end{aligned}$$

8

$$\begin{aligned}
& 7a - 6b + 9b - 13a \\
&= 7a - 13a - 6b + 9b \\
&= (7 - 13)a + (-6 + 9)b \\
&= -6a + 3b
\end{aligned}$$

9

$$\begin{aligned}
& 13y^2 - 8y - 17y^2 - 2y \\
&= 13y^2 - 17y^2 - 8y - 2y \\
&= (13 - 17)y^2 + (-8 - 2)y \\
&= -4y^2 - 10y
\end{aligned}$$

10

$$\begin{aligned}
& -16y^2 + y - 12y - 18y^2 \\
&= -16y^2 - 18y^2 + y - 12y \\
&= (-16 - 18)y^2 + (1 - 12)y \\
&= -34y^2 - 11y
\end{aligned}$$

## 問題

次の式の計算をしましょう。

1

$$(-x + 5y) - (-3x - y)$$

2

$$(18x^2 - 3xy) + (-8x^2 + 5xy)$$

3

$$(10x - 20y) - (-3x - 20y)$$

4

$$(6x + 8y) + (x - 11y)$$

5

$$(-18a + 7b) - (-3a + 8b)$$

6

$$(9x^2 - 7x) + (x^2 - 5x)$$

7

$$(-10a - 11b) - (12a - 2b)$$

8

$$(-12x - 17y) + (5x + 16y)$$

1

$$\begin{aligned}
& (-x + 5y) - (-3x - y) \\
&= -x + 5y + 3x + y \\
&= -x + 3x + 5y + y \\
&= (-1 + 3)x + (5 + 1)y \\
&= 2x + 6y
\end{aligned}$$

2

$$\begin{aligned}
& (18x^2 - 3xy) + (-8x^2 + 5xy) \\
&= 18x^2 - 3xy - 8x^2 + 5xy \\
&= 18x^2 - 8x^2 - 3xy + 5xy \\
&= (18 - 8)x^2 + (-3 + 5)xy \\
&= 10x^2 + 2xy
\end{aligned}$$

3

$$\begin{aligned}
& (10x - 20y) - (-3x - 20y) \\
&= 10x - 20y + 3x + 20y \\
&= 10x + 3x - 20y + 20y \\
&= (10 + 3)x + (-20 + 20)y \\
&= 13x
\end{aligned}$$

4

$$\begin{aligned}
& (6x + 8y) + (x - 11y) \\
&= 6x + 8y + x - 11y \\
&= 6x + x + 8y - 11y \\
&= (6 + 1)x + (8 - 11)y \\
&= 7x - 3y
\end{aligned}$$

5

$$\begin{aligned}
& (-18a + 7b) - (-3a + 8b) \\
&= -18a + 7b + 3a - 8b \\
&= -18a + 3a + 7b - 8b \\
&= (-18 + 3)a + (7 - 8)b \\
&= -15a - b
\end{aligned}$$

6

$$\begin{aligned}
& (9x^2 - 7x) + (x^2 - 5x) \\
&= 9x^2 - 7x + x^2 - 5x \\
&= 9x^2 + x^2 - 7x - 5x \\
&= (9 + 1)x^2 + (-7 - 5)x \\
&= 10x^2 - 12x
\end{aligned}$$

7

$$\begin{aligned}
& (-10a - 11b) - (12a - 2b) \\
&= -10a - 11b - 12a + 2b \\
&= -10a - 12a - 11b + 2b \\
&= (-10 - 12)a + (-11 + 2)b \\
&= -22a - 9b
\end{aligned}$$

8

$$\begin{aligned}
& (-12x - 17y) + (5x + 16y) \\
&= -12x - 17y + 5x + 16y \\
&= -12x + 5x - 17y + 16y \\
&= (-12 + 5)x + (-17 + 16)y \\
&= -7x - y
\end{aligned}$$

①

$$(17a^2 + 14a) - (-18a^2 + 17a)$$

②

$$(-2x^2 + 4xy) + (18x^2 - 15xy)$$

③

$$(-18a^2 + 12a) - (7a^2 + 6a)$$

④

$$(7a + 19b) - (18a + 4b)$$

⑤

$$(-3x^2 + 6x) - (8x^2 + 7x)$$

⑥

$$(-4a^2 + 19ab) - (-10a^2 - 4ab)$$

⑦

$$(5x^2 + 19x) - (-10x^2 + 8x)$$

⑧

$$(-14a^2 + 15a) - (-16a^2 + 17a)$$

1

$$\begin{aligned}
& (17a^2 + 14a) - (-18a^2 + 17a) \\
&= 17a^2 + 14a + 18a^2 - 17a \\
&= 17a^2 + 18a^2 + 14a - 17a \\
&= (17 + 18)a^2 + (14 - 17)a \\
&= 35a^2 - 3a
\end{aligned}$$

2

$$\begin{aligned}
& (-2x^2 + 4xy) + (18x^2 - 15xy) \\
&= -2x^2 + 4xy + 18x^2 - 15xy \\
&= -2x^2 + 18x^2 + 4xy - 15xy \\
&= (-2 + 18)x^2 + (4 - 15)xy \\
&= 16x^2 - 11xy
\end{aligned}$$

3

$$\begin{aligned}
& (-18a^2 + 12a) - (7a^2 + 6a) \\
&= -18a^2 + 12a - 7a^2 - 6a \\
&= -18a^2 - 7a^2 + 12a - 6a \\
&= (-18 - 7)a^2 + (12 - 6)a \\
&= -25a^2 + 6a
\end{aligned}$$

4

$$\begin{aligned}
& (7a + 19b) - (18a + 4b) \\
&= 7a + 19b - 18a - 4b \\
&= 7a - 18a + 19b - 4b \\
&= (7 - 18)a + (19 - 4)b \\
&= -11a + 15b
\end{aligned}$$

5

$$\begin{aligned}
& (-3x^2 + 6x) - (8x^2 + 7x) \\
&= -3x^2 + 6x - 8x^2 - 7x \\
&= -3x^2 - 8x^2 + 6x - 7x \\
&= (-3 - 8)x^2 + (6 - 7)x \\
&= -11x^2 - x
\end{aligned}$$

6

$$\begin{aligned}
& (-4a^2 + 19ab) - (-10a^2 - 4ab) \\
&= -4a^2 + 19ab + 10a^2 + 4ab \\
&= -4a^2 + 10a^2 + 19ab + 4ab \\
&= (-4 + 10)a^2 + (19 + 4)ab \\
&= 6a^2 + 23ab
\end{aligned}$$

7

$$\begin{aligned}
& (5x^2 + 19x) - (-10x^2 + 8x) \\
&= 5x^2 + 19x + 10x^2 - 8x \\
&= 5x^2 + 10x^2 + 19x - 8x \\
&= (5 + 10)x^2 + (19 - 8)x \\
&= 15x^2 + 11x
\end{aligned}$$

8

$$\begin{aligned}
& (-14a^2 + 15a) - (-16a^2 + 17a) \\
&= -14a^2 + 15a + 16a^2 - 17a \\
&= -14a^2 + 16a^2 + 15a - 17a \\
&= (-14 + 16)a^2 + (15 - 17)a \\
&= 2a^2 - 2a
\end{aligned}$$



1

$$(-12x^2 - 10xy) - (16x^2 - 7xy)$$

2

$$(15a^2 - 18a) - (11a^2 + 8a)$$

3

$$(12a^2 - 5ab) - (3a^2 - 12ab)$$

4

$$(-7a^2 + 9a) + (14a^2 + 5a)$$

5

$$(-17x^2 + 9x) + (-9x^2 - 4x)$$

6

$$(12a^2 - 10a) - (-3a^2 + a)$$

7

$$(12a^2 + 5a) + (-6a^2 + 6a)$$

8

$$(-15a - 15b) - (-11a + 8b)$$

1

$$\begin{aligned}
& (-12x^2 - 10xy) - (16x^2 - 7xy) \\
&= -12x^2 - 10xy - 16x^2 + 7xy \\
&= -12x^2 - 16x^2 - 10xy + 7xy \\
&= (-12 - 16)x^2 + (-10 + 7)xy \\
&= -28x^2 - 3xy
\end{aligned}$$

2

$$\begin{aligned}
& (15a^2 - 18a) - (11a^2 + 8a) \\
&= 15a^2 - 18a - 11a^2 - 8a \\
&= 15a^2 - 11a^2 - 18a - 8a \\
&= (15 - 11)a^2 + (-18 - 8)a \\
&= 4a^2 - 26a
\end{aligned}$$

3

$$\begin{aligned}
& (12a^2 - 5ab) - (3a^2 - 12ab) \\
&= 12a^2 - 5ab - 3a^2 + 12ab \\
&= 12a^2 - 3a^2 - 5ab + 12ab \\
&= (12 - 3)a^2 + (-5 + 12)ab \\
&= 9a^2 + 7ab
\end{aligned}$$

4

$$\begin{aligned}
& (-7a^2 + 9a) + (14a^2 + 5a) \\
&= -7a^2 + 9a + 14a^2 + 5a \\
&= -7a^2 + 14a^2 + 9a + 5a \\
&= (-7 + 14)a^2 + (9 + 5)a \\
&= 7a^2 + 14a
\end{aligned}$$

5

$$\begin{aligned}
& (-17x^2 + 9x) + (-9x^2 - 4x) \\
&= -17x^2 + 9x - 9x^2 - 4x \\
&= -17x^2 - 9x^2 + 9x - 4x \\
&= (-17 - 9)x^2 + (9 - 4)x \\
&= -26x^2 + 5x
\end{aligned}$$

6

$$\begin{aligned}
& (12a^2 - 10a) - (-3a^2 + a) \\
&= 12a^2 - 10a + 3a^2 - a \\
&= 12a^2 + 3a^2 - 10a - a \\
&= (12 + 3)a^2 + (-10 - 1)a \\
&= 15a^2 - 11a
\end{aligned}$$

7

$$\begin{aligned}
& (12a^2 + 5a) + (-6a^2 + 6a) \\
&= 12a^2 + 5a - 6a^2 + 6a \\
&= 12a^2 - 6a^2 + 5a + 6a \\
&= (12 - 6)a^2 + (5 + 6)a \\
&= 6a^2 + 11a
\end{aligned}$$

8

$$\begin{aligned}
& (-15a - 15b) - (-11a + 8b) \\
&= -15a - 15b + 11a - 8b \\
&= -15a + 11a - 15b - 8b \\
&= (-15 + 11)a + (-15 - 8)b \\
&= -4a - 23b
\end{aligned}$$

①

$$(-13x^2 - 14xy) - (-16x^2 + 5xy)$$

②

$$(-7a^2 + 20a) + (a^2 + 8a)$$

③

$$(10x^2 - 8x) - (-5x^2 - x)$$

④

$$(20a^2 + 18a) - (-a^2 + 4a)$$

⑤

$$(19a^2 + 9ab) + (-18a^2 - 12ab)$$

⑥

$$(-16x^2 + 13xy) - (-16x^2 - xy)$$

⑦

$$(-15a^2 + ab) + (-20a^2 - 10ab)$$

⑧

$$(11x + 15y) - (17x - 19y)$$

1

$$\begin{aligned}
 & (-13x^2 - 14xy) - (-16x^2 + 5xy) \\
 &= -13x^2 - 14xy + 16x^2 - 5xy \\
 &= -13x^2 + 16x^2 - 14xy - 5xy \\
 &= (-13 + 16)x^2 + (-14 - 5)xy \\
 &= 3x^2 - 19xy
 \end{aligned}$$

2

$$\begin{aligned}
 & (-7a^2 + 20a) + (a^2 + 8a) \\
 &= -7a^2 + 20a + a^2 + 8a \\
 &= -7a^2 + a^2 + 20a + 8a \\
 &= (-7 + 1)a^2 + (20 + 8)a \\
 &= -6a^2 + 28a
 \end{aligned}$$

3

$$\begin{aligned}
 & (10x^2 - 8x) - (-5x^2 - x) \\
 &= 10x^2 - 8x + 5x^2 + x \\
 &= 10x^2 + 5x^2 - 8x + x \\
 &= (10 + 5)x^2 + (-8 + 1)x \\
 &= 15x^2 - 7x
 \end{aligned}$$

4

$$\begin{aligned}
 & (20a^2 + 18a) - (-a^2 + 4a) \\
 &= 20a^2 + 18a + a^2 - 4a \\
 &= 20a^2 + a^2 + 18a - 4a \\
 &= (20 + 1)a^2 + (18 - 4)a \\
 &= 21a^2 + 14a
 \end{aligned}$$

5

$$\begin{aligned}
 & (19a^2 + 9ab) + (-18a^2 - 12ab) \\
 &= 19a^2 + 9ab - 18a^2 - 12ab \\
 &= 19a^2 - 18a^2 + 9ab - 12ab \\
 &= (19 - 18)a^2 + (9 - 12)ab \\
 &= a^2 - 3ab
 \end{aligned}$$

6

$$\begin{aligned}
 & (-16x^2 + 13xy) - (-16x^2 - xy) \\
 &= -16x^2 + 13xy + 16x^2 + xy \\
 &= -16x^2 + 16x^2 + 13xy + xy \\
 &= (-16 + 16)x^2 + (13 + 1)xy \\
 &= 14xy
 \end{aligned}$$

7

$$\begin{aligned}
 & (-15a^2 + ab) + (-20a^2 - 10ab) \\
 &= -15a^2 + ab - 20a^2 - 10ab \\
 &= -15a^2 - 20a^2 + ab - 10ab \\
 &= (-15 - 20)a^2 + (1 - 10)ab \\
 &= -35a^2 - 9ab
 \end{aligned}$$

8

$$\begin{aligned}
 & (11x + 15y) - (17x - 19y) \\
 &= 11x + 15y - 17x + 19y \\
 &= 11x - 17x + 15y + 19y \\
 &= (11 - 17)x + (15 + 19)y \\
 &= -6x + 34y
 \end{aligned}$$

①

$$(15a^2 - 6a) - (-7a^2 + 2a)$$

②

$$(16x^2 + 17xy) - (-5x^2 + 4xy)$$

③

$$(5x^2 + 3xy) - (-3x^2 + 17xy)$$

④

$$(16a^2 + 11a) - (-12a^2 - 20a)$$

⑤

$$(18x - 18y) + (-14x - 20y)$$

⑥

$$(5a^2 - 3a) - (13a^2 + 20a)$$

⑦

$$(2x + 2y) - (17x - y)$$

⑧

$$(2x^2 + 6xy) - (-13x^2 - 18xy)$$

1

$$\begin{aligned}
& (15a^2 - 6a) - (-7a^2 + 2a) \\
&= 15a^2 - 6a + 7a^2 - 2a \\
&= 15a^2 + 7a^2 - 6a - 2a \\
&= (15 + 7)a^2 + (-6 - 2)a \\
&= 22a^2 - 8a
\end{aligned}$$

2

$$\begin{aligned}
& (16x^2 + 17xy) - (-5x^2 + 4xy) \\
&= 16x^2 + 17xy + 5x^2 - 4xy \\
&= 16x^2 + 5x^2 + 17xy - 4xy \\
&= (16 + 5)x^2 + (17 - 4)xy \\
&= 21x^2 + 13xy
\end{aligned}$$

3

$$\begin{aligned}
& (5x^2 + 3xy) - (-3x^2 + 17xy) \\
&= 5x^2 + 3xy + 3x^2 - 17xy \\
&= 5x^2 + 3x^2 + 3xy - 17xy \\
&= (5 + 3)x^2 + (3 - 17)xy \\
&= 8x^2 - 14xy
\end{aligned}$$

4

$$\begin{aligned}
& (16a^2 + 11a) - (-12a^2 - 20a) \\
&= 16a^2 + 11a + 12a^2 + 20a \\
&= 16a^2 + 12a^2 + 11a + 20a \\
&= (16 + 12)a^2 + (11 + 20)a \\
&= 28a^2 + 31a
\end{aligned}$$

5

$$\begin{aligned}
& (18x - 18y) + (-14x - 20y) \\
&= 18x - 18y - 14x - 20y \\
&= 18x - 14x - 18y - 20y \\
&= (18 - 14)x + (-18 - 20)y \\
&= 4x - 38y
\end{aligned}$$

6

$$\begin{aligned}
& (5a^2 - 3a) - (13a^2 + 20a) \\
&= 5a^2 - 3a - 13a^2 - 20a \\
&= 5a^2 - 13a^2 - 3a - 20a \\
&= (5 - 13)a^2 + (-3 - 20)a \\
&= -8a^2 - 23a
\end{aligned}$$

7

$$\begin{aligned}
& (2x + 2y) - (17x - y) \\
&= 2x + 2y - 17x + y \\
&= 2x - 17x + 2y + y \\
&= (2 - 17)x + (2 + 1)y \\
&= -15x + 3y
\end{aligned}$$

8

$$\begin{aligned}
& (2x^2 + 6xy) - (-13x^2 - 18xy) \\
&= 2x^2 + 6xy + 13x^2 + 18xy \\
&= 2x^2 + 13x^2 + 6xy + 18xy \\
&= (2 + 13)x^2 + (6 + 18)xy \\
&= 15x^2 + 24xy
\end{aligned}$$

①

$$(11a^2 - 5ab) - (-20a^2 - 10ab)$$

②

$$(-8x + 15y) + (-19x - 2y)$$

③

$$(-13x^2 + 11xy) + (19x^2 - 18xy)$$

④

$$(16a^2 - 16ab) - (-16a^2 + 9ab)$$

⑤

$$(10a^2 - 2ab) + (-7a^2 - 12ab)$$

⑥

$$(4x - 13y) + (16x + 8y)$$

⑦

$$(-17x + 9y) - (2x - 8y)$$

⑧

$$(-12x^2 - 18x) + (-17x^2 - 17x)$$

1

$$\begin{aligned}
& (11a^2 - 5ab) - (-20a^2 - 10ab) \\
&= 11a^2 - 5ab + 20a^2 + 10ab \\
&= 11a^2 + 20a^2 - 5ab + 10ab \\
&= (11 + 20)a^2 + (-5 + 10)ab \\
&= 31a^2 + 5ab
\end{aligned}$$

2

$$\begin{aligned}
& (-8x + 15y) + (-19x - 2y) \\
&= -8x + 15y - 19x - 2y \\
&= -8x - 19x + 15y - 2y \\
&= (-8 - 19)x + (15 - 2)y \\
&= -27x + 13y
\end{aligned}$$

3

$$\begin{aligned}
& (-13x^2 + 11xy) + (19x^2 - 18xy) \\
&= -13x^2 + 11xy + 19x^2 - 18xy \\
&= -13x^2 + 19x^2 + 11xy - 18xy \\
&= (-13 + 19)x^2 + (11 - 18)xy \\
&= 6x^2 - 7xy
\end{aligned}$$

4

$$\begin{aligned}
& (16a^2 - 16ab) - (-16a^2 + 9ab) \\
&= 16a^2 - 16ab + 16a^2 - 9ab \\
&= 16a^2 + 16a^2 - 16ab - 9ab \\
&= (16 + 16)a^2 + (-16 - 9)ab \\
&= 32a^2 - 25ab
\end{aligned}$$

5

$$\begin{aligned}
& (10a^2 - 2ab) + (-7a^2 - 12ab) \\
&= 10a^2 - 2ab - 7a^2 - 12ab \\
&= 10a^2 - 7a^2 - 2ab - 12ab \\
&= (10 - 7)a^2 + (-2 - 12)ab \\
&= 3a^2 - 14ab
\end{aligned}$$

6

$$\begin{aligned}
& (4x - 13y) + (16x + 8y) \\
&= 4x - 13y + 16x + 8y \\
&= 4x + 16x - 13y + 8y \\
&= (4 + 16)x + (-13 + 8)y \\
&= 20x - 5y
\end{aligned}$$

7

$$\begin{aligned}
& (-17x + 9y) - (2x - 8y) \\
&= -17x + 9y - 2x + 8y \\
&= -17x - 2x + 9y + 8y \\
&= (-17 - 2)x + (9 + 8)y \\
&= -19x + 17y
\end{aligned}$$

8

$$\begin{aligned}
& (-12x^2 - 18x) + (-17x^2 - 17x) \\
&= -12x^2 - 18x - 17x^2 - 17x \\
&= -12x^2 - 17x^2 - 18x - 17x \\
&= (-12 - 17)x^2 + (-18 - 17)x \\
&= -29x^2 - 35x
\end{aligned}$$



①

$$(-17x^2 + 19xy) - (-2x^2 - 13xy)$$

②

$$(18x^2 + 10xy) + (-15x^2 - 5xy)$$

③

$$(-17x + 6y) + (5x - 17y)$$

④

$$(-17a^2 - 11a) - (13a^2 + 9a)$$

⑤

$$(-4x^2 + 17x) - (-20x^2 - 3x)$$

⑥

$$(-2a + 16b) - (5a - 9b)$$

⑦

$$(-9a^2 + 13ab) - (8a^2 - 3ab)$$

⑧

$$(2x^2 - 17x) - (12x^2 - 7x)$$

1

$$\begin{aligned}
& (-17x^2 + 19xy) - (-2x^2 - 13xy) \\
&= -17x^2 + 19xy + 2x^2 + 13xy \\
&= -17x^2 + 2x^2 + 19xy + 13xy \\
&= (-17 + 2)x^2 + (19 + 13)xy \\
&= -15x^2 + 32xy
\end{aligned}$$

2

$$\begin{aligned}
& (18x^2 + 10xy) + (-15x^2 - 5xy) \\
&= 18x^2 + 10xy - 15x^2 - 5xy \\
&= 18x^2 - 15x^2 + 10xy - 5xy \\
&= (18 - 15)x^2 + (10 - 5)xy \\
&= 3x^2 + 5xy
\end{aligned}$$

3

$$\begin{aligned}
& (-17x + 6y) + (5x - 17y) \\
&= -17x + 6y + 5x - 17y \\
&= -17x + 5x + 6y - 17y \\
&= (-17 + 5)x + (6 - 17)y \\
&= -12x - 11y
\end{aligned}$$

4

$$\begin{aligned}
& (-17a^2 - 11a) - (13a^2 + 9a) \\
&= -17a^2 - 11a - 13a^2 - 9a \\
&= -17a^2 - 13a^2 - 11a - 9a \\
&= (-17 - 13)a^2 + (-11 - 9)a \\
&= -30a^2 - 20a
\end{aligned}$$

5

$$\begin{aligned}
& (-4x^2 + 17x) - (-20x^2 - 3x) \\
&= -4x^2 + 17x + 20x^2 + 3x \\
&= -4x^2 + 20x^2 + 17x + 3x \\
&= (-4 + 20)x^2 + (17 + 3)x \\
&= 16x^2 + 20x
\end{aligned}$$

6

$$\begin{aligned}
& (-2a + 16b) - (5a - 9b) \\
&= -2a + 16b - 5a + 9b \\
&= -2a - 5a + 16b + 9b \\
&= (-2 - 5)a + (16 + 9)b \\
&= -7a + 25b
\end{aligned}$$

7

$$\begin{aligned}
& (-9a^2 + 13ab) - (8a^2 - 3ab) \\
&= -9a^2 + 13ab - 8a^2 + 3ab \\
&= -9a^2 - 8a^2 + 13ab + 3ab \\
&= (-9 - 8)a^2 + (13 + 3)ab \\
&= -17a^2 + 16ab
\end{aligned}$$

8

$$\begin{aligned}
& (2x^2 - 17x) - (12x^2 - 7x) \\
&= 2x^2 - 17x - 12x^2 + 7x \\
&= 2x^2 - 12x^2 - 17x + 7x \\
&= (2 - 12)x^2 + (-17 + 7)x \\
&= -10x^2 - 10x
\end{aligned}$$

1

$$(-8x + 10y) + (12x - 8y)$$

2

$$(-5a + 6b) - (8a - 19b)$$

3

$$(-5a - 4b) - (-13a + 16b)$$

4

$$(-a - 17b) - (10a - 10b)$$

5

$$(-20x^2 - 11xy) - (4x^2 - 16xy)$$

6

$$(-15a^2 + 4a) + (20a^2 - 16a)$$

7

$$(-12x^2 - 15xy) - (3x^2 - 11xy)$$

8

$$(-16x^2 + 12x) + (10x^2 + 8x)$$

1

$$\begin{aligned}
& (-8x + 10y) + (12x - 8y) \\
&= -8x + 10y + 12x - 8y \\
&= -8x + 12x + 10y - 8y \\
&= (-8 + 12)x + (10 - 8)y \\
&= 4x + 2y
\end{aligned}$$

2

$$\begin{aligned}
& (-5a + 6b) - (8a - 19b) \\
&= -5a + 6b - 8a + 19b \\
&= -5a - 8a + 6b + 19b \\
&= (-5 - 8)a + (6 + 19)b \\
&= -13a + 25b
\end{aligned}$$

3

$$\begin{aligned}
& (-5a - 4b) - (-13a + 16b) \\
&= -5a - 4b + 13a - 16b \\
&= -5a + 13a - 4b - 16b \\
&= (-5 + 13)a + (-4 - 16)b \\
&= 8a - 20b
\end{aligned}$$

4

$$\begin{aligned}
& (-a - 17b) - (10a - 10b) \\
&= -a - 17b - 10a + 10b \\
&= -a - 10a - 17b + 10b \\
&= (-1 - 10)a + (-17 + 10)b \\
&= -11a - 7b
\end{aligned}$$

5

$$\begin{aligned}
& (-20x^2 - 11xy) - (4x^2 - 16xy) \\
&= -20x^2 - 11xy - 4x^2 + 16xy \\
&= -20x^2 - 4x^2 - 11xy + 16xy \\
&= (-20 - 4)x^2 + (-11 + 16)xy \\
&= -24x^2 + 5xy
\end{aligned}$$

6

$$\begin{aligned}
& (-15a^2 + 4a) + (20a^2 - 16a) \\
&= -15a^2 + 4a + 20a^2 - 16a \\
&= -15a^2 + 20a^2 + 4a - 16a \\
&= (-15 + 20)a^2 + (4 - 16)a \\
&= 5a^2 - 12a
\end{aligned}$$

7

$$\begin{aligned}
& (-12x^2 - 15xy) - (3x^2 - 11xy) \\
&= -12x^2 - 15xy - 3x^2 + 11xy \\
&= -12x^2 - 3x^2 - 15xy + 11xy \\
&= (-12 - 3)x^2 + (-15 + 11)xy \\
&= -15x^2 - 4xy
\end{aligned}$$

8

$$\begin{aligned}
& (-16x^2 + 12x) + (10x^2 + 8x) \\
&= -16x^2 + 12x + 10x^2 + 8x \\
&= -16x^2 + 10x^2 + 12x + 8x \\
&= (-16 + 10)x^2 + (12 + 8)x \\
&= -6x^2 + 20x
\end{aligned}$$

## 問題

次の2つの式の和を求めましょう。また左の式から右の式を引いたときの差を求めましょう。

①

$$5x^2 + 16x, 15x^2 + 2x$$

②

$$15x - 14y, -15x - 19y$$

③

$$-3b^2 + 3b, -7b^2 + 9b$$

④

$$-12a^2 - 18a, 14a^2 + 19a$$

1

和

$$\begin{aligned}
 & (5x^2 + 16x) + (15x^2 + 2x) \\
 &= 5x^2 + 16x + 15x^2 + 2x \\
 &= 5x^2 + 15x^2 + 16x + 2x \\
 &= (5 + 15)x^2 + (16 + 2)x \\
 &= 20x^2 + 18x
 \end{aligned}$$

差

$$\begin{aligned}
 & (5x^2 + 16x) - (15x^2 + 2x) \\
 &= 5x^2 + 16x - 15x^2 - 2x \\
 &= 5x^2 - 15x^2 + 16x - 2x \\
 &= (5 - 15)x^2 + (16 - 2)x \\
 &= -10x^2 + 14x
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (-3b^2 + 3b) + (-7b^2 + 9b) \\
 &= -3b^2 + 3b - 7b^2 + 9b \\
 &= -3b^2 - 7b^2 + 3b + 9b \\
 &= (-3 - 7)b^2 + (3 + 9)b \\
 &= -10b^2 + 12b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-3b^2 + 3b) - (-7b^2 + 9b) \\
 &= -3b^2 + 3b + 7b^2 - 9b \\
 &= -3b^2 + 7b^2 + 3b - 9b \\
 &= (-3 + 7)b^2 + (3 - 9)b \\
 &= 4b^2 - 6b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (15x - 14y) + (-15x - 19y) \\
 &= 15x - 14y - 15x - 19y \\
 &= 15x - 15x - 14y - 19y \\
 &= (15 - 15)x + (-14 - 19)y \\
 &= -33y
 \end{aligned}$$

差

$$\begin{aligned}
 & (15x - 14y) - (-15x - 19y) \\
 &= 15x - 14y + 15x + 19y \\
 &= 15x + 15x - 14y + 19y \\
 &= (15 + 15)x + (-14 + 19)y \\
 &= 30x + 5y
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-12a^2 - 18a) + (14a^2 + 19a) \\
 &= -12a^2 - 18a + 14a^2 + 19a \\
 &= -12a^2 + 14a^2 - 18a + 19a \\
 &= (-12 + 14)a^2 + (-18 + 19)a \\
 &= 2a^2 + a
 \end{aligned}$$

差

$$\begin{aligned}
 & (-12a^2 - 18a) - (14a^2 + 19a) \\
 &= -12a^2 - 18a - 14a^2 - 19a \\
 &= -12a^2 - 14a^2 - 18a - 19a \\
 &= (-12 - 14)a^2 + (-18 - 19)a \\
 &= -26a^2 - 37a
 \end{aligned}$$

①

$$-7b^2 + 17b, 8b^2 - 9b$$

②

$$-7a^2 - 10a, -16a^2 + 9a$$

③

$$16b^2 + 11b, 10b^2 + 15b$$

④

$$-15a - 2b, -3a + 14b$$



1

和

$$\begin{aligned}
 & (-7b^2 + 17b) + (8b^2 - 9b) \\
 &= -7b^2 + 17b + 8b^2 - 9b \\
 &= -7b^2 + 8b^2 + 17b - 9b \\
 &= (-7 + 8)b^2 + (17 - 9)b \\
 &= b^2 + 8b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-7b^2 + 17b) - (8b^2 - 9b) \\
 &= -7b^2 + 17b - 8b^2 + 9b \\
 &= -7b^2 - 8b^2 + 17b + 9b \\
 &= (-7 - 8)b^2 + (17 + 9)b \\
 &= -15b^2 + 26b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (16b^2 + 11b) + (10b^2 + 15b) \\
 &= 16b^2 + 11b + 10b^2 + 15b \\
 &= 16b^2 + 10b^2 + 11b + 15b \\
 &= (16 + 10)b^2 + (11 + 15)b \\
 &= 26b^2 + 26b
 \end{aligned}$$

差

$$\begin{aligned}
 & (16b^2 + 11b) - (10b^2 + 15b) \\
 &= 16b^2 + 11b - 10b^2 - 15b \\
 &= 16b^2 - 10b^2 + 11b - 15b \\
 &= (16 - 10)b^2 + (11 - 15)b \\
 &= 6b^2 - 4b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-7a^2 - 10a) + (-16a^2 + 9a) \\
 &= -7a^2 - 10a - 16a^2 + 9a \\
 &= -7a^2 - 16a^2 - 10a + 9a \\
 &= (-7 - 16)a^2 + (-10 + 9)a \\
 &= -23a^2 - a
 \end{aligned}$$

差

$$\begin{aligned}
 & (-7a^2 - 10a) - (-16a^2 + 9a) \\
 &= -7a^2 - 10a + 16a^2 - 9a \\
 &= -7a^2 + 16a^2 - 10a - 9a \\
 &= (-7 + 16)a^2 + (-10 - 9)a \\
 &= 9a^2 - 19a
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-15a - 2b) + (-3a + 14b) \\
 &= -15a - 2b - 3a + 14b \\
 &= -15a - 3a - 2b + 14b \\
 &= (-15 - 3)a + (-2 + 14)b \\
 &= -18a + 12b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-15a - 2b) - (-3a + 14b) \\
 &= -15a - 2b + 3a - 14b \\
 &= -15a + 3a - 2b - 14b \\
 &= (-15 + 3)a + (-2 - 14)b \\
 &= -12a - 16b
 \end{aligned}$$

1

$$14a + 3b, 14a + 5b$$

2

$$10x - 20y, 12x - 9y$$

3

$$-12a - 8b, 7a - 9b$$

4

$$7a^2 + 6a, 4a^2 - 12a$$

1

和

$$\begin{aligned}
 & (14a + 3b) + (14a + 5b) \\
 &= 14a + 3b + 14a + 5b \\
 &= 14a + 14a + 3b + 5b \\
 &= (14 + 14)a + (3 + 5)b \\
 &= 28a + 8b
 \end{aligned}$$

差

$$\begin{aligned}
 & (14a + 3b) - (14a + 5b) \\
 &= 14a + 3b - 14a - 5b \\
 &= 14a - 14a + 3b - 5b \\
 &= (14 - 14)a + (3 - 5)b \\
 &= -2b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (-12a - 8b) + (7a - 9b) \\
 &= -12a - 8b + 7a - 9b \\
 &= -12a + 7a - 8b - 9b \\
 &= (-12 + 7)a + (-8 - 9)b \\
 &= -5a - 17b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-12a - 8b) - (7a - 9b) \\
 &= -12a - 8b - 7a + 9b \\
 &= -12a - 7a - 8b + 9b \\
 &= (-12 - 7)a + (-8 + 9)b \\
 &= -19a + b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (10x - 20y) + (12x - 9y) \\
 &= 10x - 20y + 12x - 9y \\
 &= 10x + 12x - 20y - 9y \\
 &= (10 + 12)x + (-20 - 9)y \\
 &= 22x - 29y
 \end{aligned}$$

差

$$\begin{aligned}
 & (10x - 20y) - (12x - 9y) \\
 &= 10x - 20y - 12x + 9y \\
 &= 10x - 12x - 20y + 9y \\
 &= (10 - 12)x + (-20 + 9)y \\
 &= -2x - 11y
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (7a^2 + 6a) + (4a^2 - 12a) \\
 &= 7a^2 + 6a + 4a^2 - 12a \\
 &= 7a^2 + 4a^2 + 6a - 12a \\
 &= (7 + 4)a^2 + (6 - 12)a \\
 &= 11a^2 - 6a
 \end{aligned}$$

差

$$\begin{aligned}
 & (7a^2 + 6a) - (4a^2 - 12a) \\
 &= 7a^2 + 6a - 4a^2 + 12a \\
 &= 7a^2 - 4a^2 + 6a + 12a \\
 &= (7 - 4)a^2 + (6 + 12)a \\
 &= 3a^2 + 18a
 \end{aligned}$$

①

$$-8x^2 + 14x, -17x^2 + 8x$$

②

$$5a + 16b, 9a - 17b$$

③

$$5a + 4b, -6a + 11b$$

④

$$-6y^2 - 19y, 6y^2 + 10y$$

1

和

$$\begin{aligned}
 & (-8x^2 + 14x) + (-17x^2 + 8x) \\
 &= -8x^2 + 14x - 17x^2 + 8x \\
 &= -8x^2 - 17x^2 + 14x + 8x \\
 &= (-8 - 17)x^2 + (14 + 8)x \\
 &= -25x^2 + 22x
 \end{aligned}$$

差

$$\begin{aligned}
 & (-8x^2 + 14x) - (-17x^2 + 8x) \\
 &= -8x^2 + 14x + 17x^2 - 8x \\
 &= -8x^2 + 17x^2 + 14x - 8x \\
 &= (-8 + 17)x^2 + (14 - 8)x \\
 &= 9x^2 + 6x
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (5a + 4b) + (-6a + 11b) \\
 &= 5a + 4b - 6a + 11b \\
 &= 5a - 6a + 4b + 11b \\
 &= (5 - 6)a + (4 + 11)b \\
 &= -a + 15b
 \end{aligned}$$

差

$$\begin{aligned}
 & (5a + 4b) - (-6a + 11b) \\
 &= 5a + 4b + 6a - 11b \\
 &= 5a + 6a + 4b - 11b \\
 &= (5 + 6)a + (4 - 11)b \\
 &= 11a - 7b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (5a + 16b) + (9a - 17b) \\
 &= 5a + 16b + 9a - 17b \\
 &= 5a + 9a + 16b - 17b \\
 &= (5 + 9)a + (16 - 17)b \\
 &= 14a - b
 \end{aligned}$$

差

$$\begin{aligned}
 & (5a + 16b) - (9a - 17b) \\
 &= 5a + 16b - 9a + 17b \\
 &= 5a - 9a + 16b + 17b \\
 &= (5 - 9)a + (16 + 17)b \\
 &= -4a + 33b
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-6y^2 - 19y) + (6y^2 + 10y) \\
 &= -6y^2 - 19y + 6y^2 + 10y \\
 &= -6y^2 + 6y^2 - 19y + 10y \\
 &= (-6 + 6)y^2 + (-19 + 10)y \\
 &= -9y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-6y^2 - 19y) - (6y^2 + 10y) \\
 &= -6y^2 - 19y - 6y^2 - 10y \\
 &= -6y^2 - 6y^2 - 19y - 10y \\
 &= (-6 - 6)y^2 + (-19 - 10)y \\
 &= -12y^2 - 29y
 \end{aligned}$$

①

$$-14a^2 - 2a, a^2 - 15a$$

②

$$-3x - 13y, -13x - 13y$$

③

$$7x + 15y, -7x - 18y$$

④

$$-2a - 2b, 10a - 9b$$

1

和

$$\begin{aligned}
 & (-14a^2 - 2a) + (a^2 - 15a) \\
 &= -14a^2 - 2a + a^2 - 15a \\
 &= -14a^2 + a^2 - 2a - 15a \\
 &= (-14 + 1)a^2 + (-2 - 15)a \\
 &= -13a^2 - 17a
 \end{aligned}$$

差

$$\begin{aligned}
 & (-14a^2 - 2a) - (a^2 - 15a) \\
 &= -14a^2 - 2a - a^2 + 15a \\
 &= -14a^2 - a^2 - 2a + 15a \\
 &= (-14 - 1)a^2 + (-2 + 15)a \\
 &= -15a^2 + 13a
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (7x + 15y) + (-7x - 18y) \\
 &= 7x + 15y - 7x - 18y \\
 &= 7x - 7x + 15y - 18y \\
 &= (7 - 7)x + (15 - 18)y \\
 &= -3y
 \end{aligned}$$

差

$$\begin{aligned}
 & (7x + 15y) - (-7x - 18y) \\
 &= 7x + 15y + 7x + 18y \\
 &= 7x + 7x + 15y + 18y \\
 &= (7 + 7)x + (15 + 18)y \\
 &= 14x + 33y
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-3x - 13y) + (-13x - 13y) \\
 &= -3x - 13y - 13x - 13y \\
 &= -3x - 13x - 13y - 13y \\
 &= (-3 - 13)x + (-13 - 13)y \\
 &= -16x - 26y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-3x - 13y) - (-13x - 13y) \\
 &= -3x - 13y + 13x + 13y \\
 &= -3x + 13x - 13y + 13y \\
 &= (-3 + 13)x + (-13 + 13)y \\
 &= 10x
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-2a - 2b) + (10a - 9b) \\
 &= -2a - 2b + 10a - 9b \\
 &= -2a + 10a - 2b - 9b \\
 &= (-2 + 10)a + (-2 - 9)b \\
 &= 8a - 11b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-2a - 2b) - (10a - 9b) \\
 &= -2a - 2b - 10a + 9b \\
 &= -2a - 10a - 2b + 9b \\
 &= (-2 - 10)a + (-2 + 9)b \\
 &= -12a + 7b
 \end{aligned}$$

①

$$-19b^2 + 11b, \quad -18b^2 - 10b$$

②

$$-15a^2 + 17a, \quad -15a^2 + 20a$$

③

$$4b^2 + 8b, \quad 9b^2 - 19b$$

④

$$-9x^2 - 14x, \quad 9x^2 - 19x$$



1

和

$$\begin{aligned}
 & (-19b^2 + 11b) + (-18b^2 - 10b) \\
 &= -19b^2 + 11b - 18b^2 - 10b \\
 &= -19b^2 - 18b^2 + 11b - 10b \\
 &= (-19 - 18)b^2 + (11 - 10)b \\
 &= -37b^2 + b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-19b^2 + 11b) - (-18b^2 - 10b) \\
 &= -19b^2 + 11b + 18b^2 + 10b \\
 &= -19b^2 + 18b^2 + 11b + 10b \\
 &= (-19 + 18)b^2 + (11 + 10)b \\
 &= -b^2 + 21b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (4b^2 + 8b) + (9b^2 - 19b) \\
 &= 4b^2 + 8b + 9b^2 - 19b \\
 &= 4b^2 + 9b^2 + 8b - 19b \\
 &= (4 + 9)b^2 + (8 - 19)b \\
 &= 13b^2 - 11b
 \end{aligned}$$

差

$$\begin{aligned}
 & (4b^2 + 8b) - (9b^2 - 19b) \\
 &= 4b^2 + 8b - 9b^2 + 19b \\
 &= 4b^2 - 9b^2 + 8b + 19b \\
 &= (4 - 9)b^2 + (8 + 19)b \\
 &= -5b^2 + 27b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-15a^2 + 17a) + (-15a^2 + 20a) \\
 &= -15a^2 + 17a - 15a^2 + 20a \\
 &= -15a^2 - 15a^2 + 17a + 20a \\
 &= (-15 - 15)a^2 + (17 + 20)a \\
 &= -30a^2 + 37a
 \end{aligned}$$

差

$$\begin{aligned}
 & (-15a^2 + 17a) - (-15a^2 + 20a) \\
 &= -15a^2 + 17a + 15a^2 - 20a \\
 &= -15a^2 + 15a^2 + 17a - 20a \\
 &= (-15 + 15)a^2 + (17 - 20)a \\
 &= -3a
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-9x^2 - 14x) + (9x^2 - 19x) \\
 &= -9x^2 - 14x + 9x^2 - 19x \\
 &= -9x^2 + 9x^2 - 14x - 19x \\
 &= (-9 + 9)x^2 + (-14 - 19)x \\
 &= -33x
 \end{aligned}$$

差

$$\begin{aligned}
 & (-9x^2 - 14x) - (9x^2 - 19x) \\
 &= -9x^2 - 14x - 9x^2 + 19x \\
 &= -9x^2 - 9x^2 - 14x + 19x \\
 &= (-9 - 9)x^2 + (-14 + 19)x \\
 &= -18x^2 + 5x
 \end{aligned}$$

①

$$5x^2 - 16x, -13x^2 + 2x$$

②

$$-2y^2 + 10y, -7y^2 + 7y$$

③

$$6a + 19b, 20a + 7b$$

④

$$-5y^2 - 17y, y^2 - y$$

1

和

$$\begin{aligned}
 & (5x^2 - 16x) + (-13x^2 + 2x) \\
 &= 5x^2 - 16x - 13x^2 + 2x \\
 &= 5x^2 - 13x^2 - 16x + 2x \\
 &= (5 - 13)x^2 + (-16 + 2)x \\
 &= -8x^2 - 14x
 \end{aligned}$$

差

$$\begin{aligned}
 & (5x^2 - 16x) - (-13x^2 + 2x) \\
 &= 5x^2 - 16x + 13x^2 - 2x \\
 &= 5x^2 + 13x^2 - 16x - 2x \\
 &= (5 + 13)x^2 + (-16 - 2)x \\
 &= 18x^2 - 18x
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (6a + 19b) + (20a + 7b) \\
 &= 6a + 19b + 20a + 7b \\
 &= 6a + 20a + 19b + 7b \\
 &= (6 + 20)a + (19 + 7)b \\
 &= 26a + 26b
 \end{aligned}$$

差

$$\begin{aligned}
 & (6a + 19b) - (20a + 7b) \\
 &= 6a + 19b - 20a - 7b \\
 &= 6a - 20a + 19b - 7b \\
 &= (6 - 20)a + (19 - 7)b \\
 &= -14a + 12b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-2y^2 + 10y) + (-7y^2 + 7y) \\
 &= -2y^2 + 10y - 7y^2 + 7y \\
 &= -2y^2 - 7y^2 + 10y + 7y \\
 &= (-2 - 7)y^2 + (10 + 7)y \\
 &= -9y^2 + 17y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-2y^2 + 10y) - (-7y^2 + 7y) \\
 &= -2y^2 + 10y + 7y^2 - 7y \\
 &= -2y^2 + 7y^2 + 10y - 7y \\
 &= (-2 + 7)y^2 + (10 - 7)y \\
 &= 5y^2 + 3y
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-5y^2 - 17y) + (y^2 - y) \\
 &= -5y^2 - 17y + y^2 - y \\
 &= -5y^2 + y^2 - 17y - y \\
 &= (-5 + 1)y^2 + (-17 - 1)y \\
 &= -4y^2 - 18y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-5y^2 - 17y) - (y^2 - y) \\
 &= -5y^2 - 17y - y^2 + y \\
 &= -5y^2 - y^2 - 17y + y \\
 &= (-5 - 1)y^2 + (-17 + 1)y \\
 &= -6y^2 - 16y
 \end{aligned}$$

1

$$5y^2 + 6y, -7y^2 + 8y$$

2

$$13y^2 - 5y, -y^2 + 16y$$

3

$$11a + 17b, 9a + 13b$$

4

$$a^2 - 12a, -5a^2 - 15a$$

1

和

$$\begin{aligned}
 & (5y^2 + 6y) + (-7y^2 + 8y) \\
 &= 5y^2 + 6y - 7y^2 + 8y \\
 &= 5y^2 - 7y^2 + 6y + 8y \\
 &= (5 - 7)y^2 + (6 + 8)y \\
 &= -2y^2 + 14y
 \end{aligned}$$

差

$$\begin{aligned}
 & (5y^2 + 6y) - (-7y^2 + 8y) \\
 &= 5y^2 + 6y + 7y^2 - 8y \\
 &= 5y^2 + 7y^2 + 6y - 8y \\
 &= (5 + 7)y^2 + (6 - 8)y \\
 &= 12y^2 - 2y
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (11a + 17b) + (9a + 13b) \\
 &= 11a + 17b + 9a + 13b \\
 &= 11a + 9a + 17b + 13b \\
 &= (11 + 9)a + (17 + 13)b \\
 &= 20a + 30b
 \end{aligned}$$

差

$$\begin{aligned}
 & (11a + 17b) - (9a + 13b) \\
 &= 11a + 17b - 9a - 13b \\
 &= 11a - 9a + 17b - 13b \\
 &= (11 - 9)a + (17 - 13)b \\
 &= 2a + 4b
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (13y^2 - 5y) + (-y^2 + 16y) \\
 &= 13y^2 - 5y - y^2 + 16y \\
 &= 13y^2 - y^2 - 5y + 16y \\
 &= (13 - 1)y^2 + (-5 + 16)y \\
 &= 12y^2 + 11y
 \end{aligned}$$

差

$$\begin{aligned}
 & (13y^2 - 5y) - (-y^2 + 16y) \\
 &= 13y^2 - 5y + y^2 - 16y \\
 &= 13y^2 + y^2 - 5y - 16y \\
 &= (13 + 1)y^2 + (-5 - 16)y \\
 &= 14y^2 - 21y
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (a^2 - 12a) + (-5a^2 - 15a) \\
 &= a^2 - 12a - 5a^2 - 15a \\
 &= a^2 - 5a^2 - 12a - 15a \\
 &= (1 - 5)a^2 + (-12 - 15)a \\
 &= -4a^2 - 27a
 \end{aligned}$$

差

$$\begin{aligned}
 & (a^2 - 12a) - (-5a^2 - 15a) \\
 &= a^2 - 12a + 5a^2 + 15a \\
 &= a^2 + 5a^2 - 12a + 15a \\
 &= (1 + 5)a^2 + (-12 + 15)a \\
 &= 6a^2 + 3a
 \end{aligned}$$

①

$$7x + 13y, 18x - 11y$$

②

$$-10b^2 + 2b, -9b^2 - b$$

③

$$20b^2 - 4b, 9b^2 - 4b$$

④

$$-10a^2 - 16a, 19a^2 - 4a$$

1

和

$$\begin{aligned}
 & (7x + 13y) + (18x - 11y) \\
 &= 7x + 13y + 18x - 11y \\
 &= 7x + 18x + 13y - 11y \\
 &= (7 + 18)x + (13 - 11)y \\
 &= 25x + 2y
 \end{aligned}$$

差

$$\begin{aligned}
 & (7x + 13y) - (18x - 11y) \\
 &= 7x + 13y - 18x + 11y \\
 &= 7x - 18x + 13y + 11y \\
 &= (7 - 18)x + (13 + 11)y \\
 &= -11x + 24y
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (20b^2 - 4b) + (9b^2 - 4b) \\
 &= 20b^2 - 4b + 9b^2 - 4b \\
 &= 20b^2 + 9b^2 - 4b - 4b \\
 &= (20 + 9)b^2 + (-4 - 4)b \\
 &= 29b^2 - 8b
 \end{aligned}$$

差

$$\begin{aligned}
 & (20b^2 - 4b) - (9b^2 - 4b) \\
 &= 20b^2 - 4b - 9b^2 + 4b \\
 &= 20b^2 - 9b^2 - 4b + 4b \\
 &= (20 - 9)b^2 + (-4 + 4)b \\
 &= 11b^2
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-10b^2 + 2b) + (-9b^2 - b) \\
 &= -10b^2 + 2b - 9b^2 - b \\
 &= -10b^2 - 9b^2 + 2b - b \\
 &= (-10 - 9)b^2 + (2 - 1)b \\
 &= -19b^2 + b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-10b^2 + 2b) - (-9b^2 - b) \\
 &= -10b^2 + 2b + 9b^2 + b \\
 &= -10b^2 + 9b^2 + 2b + b \\
 &= (-10 + 9)b^2 + (2 + 1)b \\
 &= -b^2 + 3b
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-10a^2 - 16a) + (19a^2 - 4a) \\
 &= -10a^2 - 16a + 19a^2 - 4a \\
 &= -10a^2 + 19a^2 - 16a - 4a \\
 &= (-10 + 19)a^2 + (-16 - 4)a \\
 &= 9a^2 - 20a
 \end{aligned}$$

差

$$\begin{aligned}
 & (-10a^2 - 16a) - (19a^2 - 4a) \\
 &= -10a^2 - 16a - 19a^2 + 4a \\
 &= -10a^2 - 19a^2 - 16a + 4a \\
 &= (-10 - 19)a^2 + (-16 + 4)a \\
 &= -29a^2 - 12a
 \end{aligned}$$

1

$$4b^2 + 14b, -20b^2 + b$$

2

$$-20a + 20b, 14a + 17b$$

3

$$19a^2 - 13a, 7a^2 - 8a$$

4

$$-6y^2 - 7y, -10y^2 + 5y$$



1

和

$$\begin{aligned}
 & (4b^2 + 14b) + (-20b^2 + b) \\
 &= 4b^2 + 14b - 20b^2 + b \\
 &= 4b^2 - 20b^2 + 14b + b \\
 &= (4 - 20)b^2 + (14 + 1)b \\
 &= -16b^2 + 15b
 \end{aligned}$$

差

$$\begin{aligned}
 & (4b^2 + 14b) - (-20b^2 + b) \\
 &= 4b^2 + 14b + 20b^2 - b \\
 &= 4b^2 + 20b^2 + 14b - b \\
 &= (4 + 20)b^2 + (14 - 1)b \\
 &= 24b^2 + 13b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (19a^2 - 13a) + (7a^2 - 8a) \\
 &= 19a^2 - 13a + 7a^2 - 8a \\
 &= 19a^2 + 7a^2 - 13a - 8a \\
 &= (19 + 7)a^2 + (-13 - 8)a \\
 &= 26a^2 - 21a
 \end{aligned}$$

差

$$\begin{aligned}
 & (19a^2 - 13a) - (7a^2 - 8a) \\
 &= 19a^2 - 13a - 7a^2 + 8a \\
 &= 19a^2 - 7a^2 - 13a + 8a \\
 &= (19 - 7)a^2 + (-13 + 8)a \\
 &= 12a^2 - 5a
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-20a + 20b) + (14a + 17b) \\
 &= -20a + 20b + 14a + 17b \\
 &= -20a + 14a + 20b + 17b \\
 &= (-20 + 14)a + (20 + 17)b \\
 &= -6a + 37b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-20a + 20b) - (14a + 17b) \\
 &= -20a + 20b - 14a - 17b \\
 &= -20a - 14a + 20b - 17b \\
 &= (-20 - 14)a + (20 - 17)b \\
 &= -34a + 3b
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-6y^2 - 7y) + (-10y^2 + 5y) \\
 &= -6y^2 - 7y - 10y^2 + 5y \\
 &= -6y^2 - 10y^2 - 7y + 5y \\
 &= (-6 - 10)y^2 + (-7 + 5)y \\
 &= -16y^2 - 2y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-6y^2 - 7y) - (-10y^2 + 5y) \\
 &= -6y^2 - 7y + 10y^2 - 5y \\
 &= -6y^2 + 10y^2 - 7y - 5y \\
 &= (-6 + 10)y^2 + (-7 - 5)y \\
 &= 4y^2 - 12y
 \end{aligned}$$

1

$$-8a - 20b, a - 15b$$

2

$$19x^2 - 16x, 7x^2 - 15x$$

3

$$-6y^2 - 14y, -11y^2 - 17y$$

4

$$9x - 13y, -11x - 7y$$

1

和

$$\begin{aligned}
 & (-8a - 20b) + (a - 15b) \\
 &= -8a - 20b + a - 15b \\
 &= -8a + a - 20b - 15b \\
 &= (-8 + 1)a + (-20 - 15)b \\
 &= -7a - 35b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-8a - 20b) - (a - 15b) \\
 &= -8a - 20b - a + 15b \\
 &= -8a - a - 20b + 15b \\
 &= (-8 - 1)a + (-20 + 15)b \\
 &= -9a - 5b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (-6y^2 - 14y) + (-11y^2 - 17y) \\
 &= -6y^2 - 14y - 11y^2 - 17y \\
 &= -6y^2 - 11y^2 - 14y - 17y \\
 &= (-6 - 11)y^2 + (-14 - 17)y \\
 &= -17y^2 - 31y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-6y^2 - 14y) - (-11y^2 - 17y) \\
 &= -6y^2 - 14y + 11y^2 + 17y \\
 &= -6y^2 + 11y^2 - 14y + 17y \\
 &= (-6 + 11)y^2 + (-14 + 17)y \\
 &= 5y^2 + 3y
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (19x^2 - 16x) + (7x^2 - 15x) \\
 &= 19x^2 - 16x + 7x^2 - 15x \\
 &= 19x^2 + 7x^2 - 16x - 15x \\
 &= (19 + 7)x^2 + (-16 - 15)x \\
 &= 26x^2 - 31x
 \end{aligned}$$

差

$$\begin{aligned}
 & (19x^2 - 16x) - (7x^2 - 15x) \\
 &= 19x^2 - 16x - 7x^2 + 15x \\
 &= 19x^2 - 7x^2 - 16x + 15x \\
 &= (19 - 7)x^2 + (-16 + 15)x \\
 &= 12x^2 - x
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (9x - 13y) + (-11x - 7y) \\
 &= 9x - 13y - 11x - 7y \\
 &= 9x - 11x - 13y - 7y \\
 &= (9 - 11)x + (-13 - 7)y \\
 &= -2x - 20y
 \end{aligned}$$

差

$$\begin{aligned}
 & (9x - 13y) - (-11x - 7y) \\
 &= 9x - 13y + 11x + 7y \\
 &= 9x + 11x - 13y + 7y \\
 &= (9 + 11)x + (-13 + 7)y \\
 &= 20x - 6y
 \end{aligned}$$

①

$$8y^2 - 14y, -8y^2 - 9y$$

②

$$3x^2 + 8x, -13x^2 - x$$

③

$$4x^2 - 18x, 18x^2 + 10x$$

④

$$-8a - 18b, -19a - 15b$$

1

和

$$\begin{aligned}
 & (8y^2 - 14y) + (-8y^2 - 9y) \\
 &= 8y^2 - 14y - 8y^2 - 9y \\
 &= 8y^2 - 8y^2 - 14y - 9y \\
 &= (8 - 8)y^2 + (-14 - 9)y \\
 &= -23y
 \end{aligned}$$

差

$$\begin{aligned}
 & (8y^2 - 14y) - (-8y^2 - 9y) \\
 &= 8y^2 - 14y + 8y^2 + 9y \\
 &= 8y^2 + 8y^2 - 14y + 9y \\
 &= (8 + 8)y^2 + (-14 + 9)y \\
 &= 16y^2 - 5y
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (4x^2 - 18x) + (18x^2 + 10x) \\
 &= 4x^2 - 18x + 18x^2 + 10x \\
 &= 4x^2 + 18x^2 - 18x + 10x \\
 &= (4 + 18)x^2 + (-18 + 10)x \\
 &= 22x^2 - 8x
 \end{aligned}$$

差

$$\begin{aligned}
 & (4x^2 - 18x) - (18x^2 + 10x) \\
 &= 4x^2 - 18x - 18x^2 - 10x \\
 &= 4x^2 - 18x^2 - 18x - 10x \\
 &= (4 - 18)x^2 + (-18 - 10)x \\
 &= -14x^2 - 28x
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (3x^2 + 8x) + (-13x^2 - x) \\
 &= 3x^2 + 8x - 13x^2 - x \\
 &= 3x^2 - 13x^2 + 8x - x \\
 &= (3 - 13)x^2 + (8 - 1)x \\
 &= -10x^2 + 7x
 \end{aligned}$$

差

$$\begin{aligned}
 & (3x^2 + 8x) - (-13x^2 - x) \\
 &= 3x^2 + 8x + 13x^2 + x \\
 &= 3x^2 + 13x^2 + 8x + x \\
 &= (3 + 13)x^2 + (8 + 1)x \\
 &= 16x^2 + 9x
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-8a - 18b) + (-19a - 15b) \\
 &= -8a - 18b - 19a - 15b \\
 &= -8a - 19a - 18b - 15b \\
 &= (-8 - 19)a + (-18 - 15)b \\
 &= -27a - 33b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-8a - 18b) - (-19a - 15b) \\
 &= -8a - 18b + 19a + 15b \\
 &= -8a + 19a - 18b + 15b \\
 &= (-8 + 19)a + (-18 + 15)b \\
 &= 11a - 3b
 \end{aligned}$$

①

$$-12x + 4y, 9x - 15y$$

②

$$-17x^2 - 19x, 19x^2 - 3x$$

③

$$-17x^2 + 6x, 20x^2 - 8x$$

④

$$-17a - 18b, 12a + 3b$$

1

和

$$\begin{aligned}
 & (-12x + 4y) + (9x - 15y) \\
 &= -12x + 4y + 9x - 15y \\
 &= -12x + 9x + 4y - 15y \\
 &= (-12 + 9)x + (4 - 15)y \\
 &= -3x - 11y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-12x + 4y) - (9x - 15y) \\
 &= -12x + 4y - 9x + 15y \\
 &= -12x - 9x + 4y + 15y \\
 &= (-12 - 9)x + (4 + 15)y \\
 &= -21x + 19y
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (-17x^2 + 6x) + (20x^2 - 8x) \\
 &= -17x^2 + 6x + 20x^2 - 8x \\
 &= -17x^2 + 20x^2 + 6x - 8x \\
 &= (-17 + 20)x^2 + (6 - 8)x \\
 &= 3x^2 - 2x
 \end{aligned}$$

差

$$\begin{aligned}
 & (-17x^2 + 6x) - (20x^2 - 8x) \\
 &= -17x^2 + 6x - 20x^2 + 8x \\
 &= -17x^2 - 20x^2 + 6x + 8x \\
 &= (-17 - 20)x^2 + (6 + 8)x \\
 &= -37x^2 + 14x
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-17x^2 - 19x) + (19x^2 - 3x) \\
 &= -17x^2 - 19x + 19x^2 - 3x \\
 &= -17x^2 + 19x^2 - 19x - 3x \\
 &= (-17 + 19)x^2 + (-19 - 3)x \\
 &= 2x^2 - 22x
 \end{aligned}$$

差

$$\begin{aligned}
 & (-17x^2 - 19x) - (19x^2 - 3x) \\
 &= -17x^2 - 19x - 19x^2 + 3x \\
 &= -17x^2 - 19x^2 - 19x + 3x \\
 &= (-17 - 19)x^2 + (-19 + 3)x \\
 &= -36x^2 - 16x
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-17a - 18b) + (12a + 3b) \\
 &= -17a - 18b + 12a + 3b \\
 &= -17a + 12a - 18b + 3b \\
 &= (-17 + 12)a + (-18 + 3)b \\
 &= -5a - 15b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-17a - 18b) - (12a + 3b) \\
 &= -17a - 18b - 12a - 3b \\
 &= -17a - 12a - 18b - 3b \\
 &= (-17 - 12)a + (-18 - 3)b \\
 &= -29a - 21b
 \end{aligned}$$

①

$$-18x^2 + 11x, 15x^2 - 18x$$

②

$$-3x + 13y, -10x + 16y$$

③

$$-16y^2 + 6y, -3y^2 - 8y$$

④

$$8y^2 + 2y, -15y^2 + 14y$$



1

和

$$\begin{aligned}
& (-18x^2 + 11x) + (15x^2 - 18x) \\
&= -18x^2 + 11x + 15x^2 - 18x \\
&= -18x^2 + 15x^2 + 11x - 18x \\
&= (-18 + 15)x^2 + (11 - 18)x \\
&= -3x^2 - 7x
\end{aligned}$$

差

$$\begin{aligned}
& (-18x^2 + 11x) - (15x^2 - 18x) \\
&= -18x^2 + 11x - 15x^2 + 18x \\
&= -18x^2 - 15x^2 + 11x + 18x \\
&= (-18 - 15)x^2 + (11 + 18)x \\
&= -33x^2 + 29x
\end{aligned}$$

3

和

$$\begin{aligned}
& (-16y^2 + 6y) + (-3y^2 - 8y) \\
&= -16y^2 + 6y - 3y^2 - 8y \\
&= -16y^2 - 3y^2 + 6y - 8y \\
&= (-16 - 3)y^2 + (6 - 8)y \\
&= -19y^2 - 2y
\end{aligned}$$

差

$$\begin{aligned}
& (-16y^2 + 6y) - (-3y^2 - 8y) \\
&= -16y^2 + 6y + 3y^2 + 8y \\
&= -16y^2 + 3y^2 + 6y + 8y \\
&= (-16 + 3)y^2 + (6 + 8)y \\
&= -13y^2 + 14y
\end{aligned}$$

2

和

$$\begin{aligned}
& (-3x + 13y) + (-10x + 16y) \\
&= -3x + 13y - 10x + 16y \\
&= -3x - 10x + 13y + 16y \\
&= (-3 - 10)x + (13 + 16)y \\
&= -13x + 29y
\end{aligned}$$

差

$$\begin{aligned}
& (-3x + 13y) - (-10x + 16y) \\
&= -3x + 13y + 10x - 16y \\
&= -3x + 10x + 13y - 16y \\
&= (-3 + 10)x + (13 - 16)y \\
&= 7x - 3y
\end{aligned}$$

4

和

$$\begin{aligned}
& (8y^2 + 2y) + (-15y^2 + 14y) \\
&= 8y^2 + 2y - 15y^2 + 14y \\
&= 8y^2 - 15y^2 + 2y + 14y \\
&= (8 - 15)y^2 + (2 + 14)y \\
&= -7y^2 + 16y
\end{aligned}$$

差

$$\begin{aligned}
& (8y^2 + 2y) - (-15y^2 + 14y) \\
&= 8y^2 + 2y + 15y^2 - 14y \\
&= 8y^2 + 15y^2 + 2y - 14y \\
&= (8 + 15)y^2 + (2 - 14)y \\
&= 23y^2 - 12y
\end{aligned}$$

①

$$-10b^2 - 13b, \quad -3b^2 - 5b$$

②

$$-8a - 4b, \quad a + 16b$$

③

$$7x^2 + 16x, \quad -3x^2 - 16x$$

④

$$7a^2 + 16a, \quad -16a^2 + 17a$$

1

和

$$\begin{aligned}
 & (-10b^2 - 13b) + (-3b^2 - 5b) \\
 &= -10b^2 - 13b - 3b^2 - 5b \\
 &= -10b^2 - 3b^2 - 13b - 5b \\
 &= (-10 - 3)b^2 + (-13 - 5)b \\
 &= -13b^2 - 18b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-10b^2 - 13b) - (-3b^2 - 5b) \\
 &= -10b^2 - 13b + 3b^2 + 5b \\
 &= -10b^2 + 3b^2 - 13b + 5b \\
 &= (-10 + 3)b^2 + (-13 + 5)b \\
 &= -7b^2 - 8b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (7x^2 + 16x) + (-3x^2 - 16x) \\
 &= 7x^2 + 16x - 3x^2 - 16x \\
 &= 7x^2 - 3x^2 + 16x - 16x \\
 &= (7 - 3)x^2 + (16 - 16)x \\
 &= 4x^2
 \end{aligned}$$

差

$$\begin{aligned}
 & (7x^2 + 16x) - (-3x^2 - 16x) \\
 &= 7x^2 + 16x + 3x^2 + 16x \\
 &= 7x^2 + 3x^2 + 16x + 16x \\
 &= (7 + 3)x^2 + (16 + 16)x \\
 &= 10x^2 + 32x
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-8a - 4b) + (a + 16b) \\
 &= -8a - 4b + a + 16b \\
 &= -8a + a - 4b + 16b \\
 &= (-8 + 1)a + (-4 + 16)b \\
 &= -7a + 12b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-8a - 4b) - (a + 16b) \\
 &= -8a - 4b - a - 16b \\
 &= -8a - a - 4b - 16b \\
 &= (-8 - 1)a + (-4 - 16)b \\
 &= -9a - 20b
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (7a^2 + 16a) + (-16a^2 + 17a) \\
 &= 7a^2 + 16a - 16a^2 + 17a \\
 &= 7a^2 - 16a^2 + 16a + 17a \\
 &= (7 - 16)a^2 + (16 + 17)a \\
 &= -9a^2 + 33a
 \end{aligned}$$

差

$$\begin{aligned}
 & (7a^2 + 16a) - (-16a^2 + 17a) \\
 &= 7a^2 + 16a + 16a^2 - 17a \\
 &= 7a^2 + 16a^2 + 16a - 17a \\
 &= (7 + 16)a^2 + (16 - 17)a \\
 &= 23a^2 - a
 \end{aligned}$$

①

$$-2b^2 + 17b, 2b^2 - 12b$$

②

$$-8b^2 + 12b, 17b^2 + 20b$$

③

$$-5y^2 + 16y, 8y^2 - 7y$$

④

$$-20a^2 - 20a, -3a^2 + 2a$$

1

和

$$\begin{aligned}
 & (-2b^2 + 17b) + (2b^2 - 12b) \\
 &= -2b^2 + 17b + 2b^2 - 12b \\
 &= -2b^2 + 2b^2 + 17b - 12b \\
 &= (-2 + 2)b^2 + (17 - 12)b \\
 &= 5b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-2b^2 + 17b) - (2b^2 - 12b) \\
 &= -2b^2 + 17b - 2b^2 + 12b \\
 &= -2b^2 - 2b^2 + 17b + 12b \\
 &= (-2 - 2)b^2 + (17 + 12)b \\
 &= -4b^2 + 29b
 \end{aligned}$$

3

和

$$\begin{aligned}
 & (-5y^2 + 16y) + (8y^2 - 7y) \\
 &= -5y^2 + 16y + 8y^2 - 7y \\
 &= -5y^2 + 8y^2 + 16y - 7y \\
 &= (-5 + 8)y^2 + (16 - 7)y \\
 &= 3y^2 + 9y
 \end{aligned}$$

差

$$\begin{aligned}
 & (-5y^2 + 16y) - (8y^2 - 7y) \\
 &= -5y^2 + 16y - 8y^2 + 7y \\
 &= -5y^2 - 8y^2 + 16y + 7y \\
 &= (-5 - 8)y^2 + (16 + 7)y \\
 &= -13y^2 + 23y
 \end{aligned}$$

2

和

$$\begin{aligned}
 & (-8b^2 + 12b) + (17b^2 + 20b) \\
 &= -8b^2 + 12b + 17b^2 + 20b \\
 &= -8b^2 + 17b^2 + 12b + 20b \\
 &= (-8 + 17)b^2 + (12 + 20)b \\
 &= 9b^2 + 32b
 \end{aligned}$$

差

$$\begin{aligned}
 & (-8b^2 + 12b) - (17b^2 + 20b) \\
 &= -8b^2 + 12b - 17b^2 - 20b \\
 &= -8b^2 - 17b^2 + 12b - 20b \\
 &= (-8 - 17)b^2 + (12 - 20)b \\
 &= -25b^2 - 8b
 \end{aligned}$$

4

和

$$\begin{aligned}
 & (-20a^2 - 20a) + (-3a^2 + 2a) \\
 &= -20a^2 - 20a - 3a^2 + 2a \\
 &= -20a^2 - 3a^2 - 20a + 2a \\
 &= (-20 - 3)a^2 + (-20 + 2)a \\
 &= -23a^2 - 18a
 \end{aligned}$$

差

$$\begin{aligned}
 & (-20a^2 - 20a) - (-3a^2 + 2a) \\
 &= -20a^2 - 20a + 3a^2 - 2a \\
 &= -20a^2 + 3a^2 - 20a - 2a \\
 &= (-20 + 3)a^2 + (-20 - 2)a \\
 &= -17a^2 - 22a
 \end{aligned}$$