

Section 5-1: Adding and Subtracting Algebraic Expressions

Monomials and Polynomials

1. 080710a, P.I. A.A.13

The sum of $8x^2 - x + 4$ and $x - 5$ is

- [A] $8x^2 - 1$ [B] $8x^2 - 2x + 9$
[C] $8x^2 + 9$ [D] $8x^2 - 2x - 1$

2. 069904a, P.I. A.A.13

The sum of $3x^2 + x + 8$ and $x^2 - 9$ can be expressed as

- [A] $4x^2 + x - 1$ [B] $3x^4 + x - 1$
[C] $4x^2 + x - 17$ [D] $4x^4 + x - 1$

3. 010108a, P.I. A.A.13

The sum of $3x^2 + 4x - 2$ and $x^2 - 5x + 3$ is

- [A] $4x^2 + x + 1$ [B] $4x^2 - x - 1$
[C] $4x^2 + x - 1$ [D] $4x^2 - x + 1$

4. 080423a, P.I. A.A.13

The expression

$(3x^2 + 2xy + 7) - (6x^2 - 4xy + 3)$ is equivalent to

- [A] $-3x^2 + 6xy + 4$ [B] $3x^2 - 6xy - 4$
[C] $3x^2 - 2xy + 4$ [D] $-3x^2 - 2xy + 4$

5. 010707a, P.I. A.A.13

The expression $(2x^2 + 6x + 5) - (6x^2 + 3x + 5)$ is equivalent to

- [A] $-4x^2 - 3x + 10$ [B] $-4x^2 + 3x$
[C] $4x^2 + 3x - 10$ [D] $4x^2 - 3x$

6. 060511a, P.I. A.A.13

The expression $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$ is equivalent to

- [A] $7x^2 + 2x - 5$ [B] $7x^2 + 2x + 1$
[C] $7x^2 - 2x + 1$ [D] $7x^2 - 12x - 5$

7. 060019a, P.I. A.A.13

If $2x^2 - 4x + 6$ is subtracted from $5x^2 + 8x - 2$, the difference is

- [A] $-3x^2 - 12x + 8$ [B] $3x^2 + 4x + 4$
[C] $3x^2 + 12x - 8$ [D] $-3x^2 + 4x + 4$

8. 010019a, P.I. A.A.13

When $3a^2 - 2a + 5$ is subtracted from $a^2 + a - 1$, the result is

- [A] $-2a^2 + 3a + 6$ [B] $2a^2 - 3a + 6$
[C] $2a^2 - 3a - 6$ [D] $-2a^2 + 3a - 6$

9. 080020a, P.I. A.A.13

When $3x^2 - 2x + 1$ is subtracted from $2x^2 + 7x + 5$, the result will be

- [A] $-x^2 + 9x + 4$ [B] $-x^2 + 5x + 6$
[C] $x^2 - 9x - 4$ [D] $x^2 + 5x + 6$

13. 010619a, P.I. A.A.13

When $3a^2 - 7a + 6$ is subtracted from $4a^2 - 3a + 4$, the result is

- [A] $7a^2 - 10a + 10$ [B] $a^2 + 4a - 2$
[C] $a^2 - 10a - 2$ [D] $-a^2 - 4a + 2$

10. 080209a, P.I. A.A.13

When $-2x^2 + 4x + 2$ is subtracted from $x^2 + 6x - 4$, the result is

- [A] $2x^2 - 2x - 6$ [B] $-x^2 + 10x - 2$
[C] $-3x^2 - 2x + 6$ [D] $3x^2 + 2x - 6$

14. 080123a, P.I. A.A.13

Subtract $5x^2 - 7x - 6$ from $9x^2 + 3x - 4$.

11. 010429a, P.I. A.A.13

If $2x^2 - x + 6$ is subtracted from $x^2 + 3x - 2$, the result is

- [A] $x^2 - 4x + 8$ [B] $x^2 + 2x - 8$
[C] $-x^2 + 2x - 8$ [D] $-x^2 + 4x - 8$

12. 010523a, P.I. A.A.13

When $3x^2 - 8x$ is subtracted from $2x^2 + 3x$, the difference is

- [A] $-x^2 + 11x$ [B] $-x^2 - 5x$
[C] $x^2 - 5x$ [D] $-x^2 - 11x$

- [1] A
- [2] A
- [3] D
- [4] A
- [5] B
- [6] B
- [7] C
- [8] D
- [9] A
- [10] D
- [11] D
- [12] A
- [13] B

[2] $4x^2 + 10x + 2$, and appropriate work is shown, such as $(9x^2 + 3x - 4) - (5x^2 - 7x - 6)$.

[1] The setup is correct, but the distribution of the negative sign is incorrect.

or [1] $14x^2 - 4x - 10$, but appropriate work is shown.

or [1] $4x^2 + 10x + 2$, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[14] incorrect procedure.