

Name: _____

Adding/Subtracting Polynomials

Simplify each of the following polynomial expression.

1. $(-4x^2 + 17x + 9) - (-13x^2 + 5x + 16)$

$x^2 +$ $x +$

2. $(8x^2 - 7x + 2) + (3x^2 - 9x - 6)$

$x^2 +$ $x +$

3. $(5x^2 - 11x + 21) + (11x^3 + 15x^2 + 17x + 16)$

- ☐ A. $-11x^3 + 20x^2 + 6x + 5$
- ☐ B. $11x^3 + 10x^2 + 28x + 37$
- ☐ C. $11x^3 + 20x^2 + 28x + 5$
- ☐ D. $11x^3 + 20x^2 + 6x + 37$

4. $(9x^3 - 2) - (6x^2 + 6x - 8)$

- ☐ A. $9x^3 - 5x^2 - 5x + 6$
- ☐ B. $3x^3 - 6x + 6$
- ☐ C. $9x^3 + 6x^2 + 6x + 10$
- ☐ D. $9x^3 - 6x^2 - 6x + 6$

5. $(3x^5 + 15x^4 - 17x^2 + 28) - (2x^5 + 14x^4 + 7x^2 - 30)$

- ☐ A. $x^5 - x^4 + 24x^2 - 58$
- ☐ B. $5x^5 + x^4 + 24x^2 - 58$
- ☐ C. $5x^5 + 29x^4 - 10x^2 - 2$
- ☐ D. $x^5 + x^4 - 24x^2 + 58$

6. $(3x^3 + 3x^2 - 3x - 12) + (5x^3 + 6x^2 - 7x - 21)$

- ☐ A. $10x^3 + 10x^2 - 3x - 2$
- ☐ B. $10x^3 + 10x^2 - 3x - 32$
- ☐ C. $-4x^3 + 10x^2 - 3x - 32$
- ☐ D. $8x^3 + 9x^2 - 10x - 33$

7. $(17x^3 - 6) - (12x^3 - 35)$

- ☐ A. $15x^3 - 9x^2 + 29$
- ☐ B. $17x^3 - 11x^2 + 41$
- ☐ C. $5x^3 + 29$
- ☐ D. $5x^3 + 12x^2 - 29$

8. $(9x^3 + 4x^2 + 4) - (4x^3 + 9x + 8)$

- ☐ A. $5x^3 + 4x^2 + 9x - 4$
- ☐ B. $13x^3 + 4x^2 + 9x + 12$
- ☐ C. $5x^3 + 4x^2 - 9x + 12$
- ☐ D. $5x^3 + 4x^2 - 9x - 4$