

Section 1: Combining Like Terms. Combine all like terms in the expressions below.

1.) $5x - 7 + 3x - 12$

2.) $-4 - 7x + 15 + 3x$

3.) $x^2 - 3x - 4 + x^2 + 7x - 18$

4.) $-3x^2 - 4x + 10x^2 - 10 + 8x - 14$

Section 2: Distributive Property. Apply the distributive property and simplify if necessary.

5.) $3(4x - 8)$

6.) $-4(7 - 2x)$

7.) $3x(x - 9)$

8.) $-4x(11 - 3x)$

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

10.) $5 - 2(2x - 12)$

11.) $3(x^2 - 4x - 12) + 2(x^2 + x - 6)$

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

Section 3: Polynomial Operations. Expand and simplify the following polynomials.

13.) $(x + 4)(x + 4)$

14.) $(x - 7)(x + 7)$

15.) $(2x + 7)(x - 3)$

16.) $(3x - 5)(4x - 11)$

17.) $-3(x - 9)(x + 2)$

*18.) $4(x + 7)^2 - 7$

*19.) $(x^2 + 2x - 8)(x^2 - 2x + 1)$