

## Assignment 2.1

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $(8n^3 + 3n^2) + (3n^3 - 8n^2)$

2)  $(7x - 2x^4) - (7x^4 + 3x)$

3)  $(7p^2 + 6p^3) - (2p^3 + 7p^2)$

4)  $(7x^3 - 5x^4) + (5x^3 - 7x^4)$

5)  $(4n^4 - 2n) + (n + 7)$

6)  $(4k^2 + 3) - (4 + 3k^2)$

7)  $(5 + 5n^3) + (4 - 7n^3)$

8)  $(7 - 3n) + (3 - 3n^4)$

9)  $(4n^4 + 5) - (5n^4 - 8)$

10)  $(5 + 3a^2) + (4 + 5a^2)$

11)  $(3m^4 - 6m^3 + 3) - (3m + 2 + 8m^4)$

12)  $(6x^2 - 1 + 5x) + (2 - 7x^2 - 7x^4)$

13)  $(7 - 4x^4 + x) - (2x^4 + 7x + 4)$

14)  $(5 - n^3 - n^2) + (7n^2 - 4n^3 - 6)$

15)  $(b^3 + 7b^4 + 2b^2) + (4b^3 + 2b^4 + b^2)$

16)  $(5 - 8k^4 + 8k^2) + (4k^4 - 5 + 4k^2)$

17)  $(5x^4 + 6 - x^2) + (3x^4 + 3x^2 + x^3)$

18)  $(7 - 4n - 6n^4) - (6n^2 - 5 - 5n)$

19) A city wants to compare the number of people who own their own home and who rent their home. The polynomials below show expressions for each. In each polynomial,  $p = 0$  corresponds to the first year.

Own:  $4p^2 + 37p + 221$

Rent:  $6p^2 + 12p + 53$

20) Open-Ended: Write two different polynomials with a difference of  $-2x^2 + 7x - 8$