

12.2.D2 ~ Multiplying Polynomials

Past due on _____ Period _____

Determine the product of the binomials. (If necessary, refer to the 12.2 example "Modeling the Product of Polynomials" in the Chapter 12 Summary.)

1) $(7n + 8)(3n - 8)$

2) $(k - 5)(4k + 3)$

3) $(2n - 3)(4n^2 + n + 3)$

4) $(4x + 3)(2x^2 + 4x + 5)$

5) $(3p + 4)(3p - 4)$

6) $(4v + 5)^2$

Simplify each expression. (If necessary, refer to the 12.1 example "Adding & Subtracting Polynomial Expressions" in the Chapter 12 Summary.)

7) $(-3n + 5) + (-8n^2 - 8n) + (-5 + 5n)$

8) $(7k + 4k^4) - (-4k^4 - 8) + (k^4 - 1)$

9) $(8x^3 - 5x + 7x^4) + (-7x^3 + 8x^4)$

10) $(a^4 + 4a^2 + 7a^3) - (-2a^2 + 3a^4)$

11) $(4p^4 + 8p + 7p^3) - (8p^4 + 7p^3 + 4p)$

12) $(7n^3 - 2n^4 + 5n) + (5n^3 + 8n + 7n^4)$

Factor out the greatest common factor (GCF) from the expression. (If necessary, refer to the 11.4 example "Factoring the GCF from an Algebraic Expression" in the Chapter 11 Summary.)

13) $5n^2 + 15n$

14) $-14m^2 + 7m + 14$

15) $-21 - 24a$

16) $15a^4 - 20a^3$

17) $12k^4 - 42k - 6$

18) $-40x^3 + 100x + 50$