Unit 7B PC Review

Date_____ Period____

Name each polynomial by degree and number of terms.

1) $-2a^2 + 4a + 2$

quadratic trinomial

2) $4n^3 - 6 + 8n^2 - 3n^5$

quintic polynomial with four terms

3) $-8 - 10n^2$

quadratic binomial

4) $-6a$

linear monomial

Write the polynomial in standard form. Identify the leading coefficient.

5) $8r^2 + 8r^6$

$8r^6 + 8r^2$
LC: 8

6) $-4x^4 - 2x + 4x^6$

$4x^6 - 4x^4 - 2x$
LC: 4

7) $2 - 7x - 6x^2 - 6x^3$

$-6x^3 - 6x^2 - 7x + 2$
LC: -6

8) $-3a^4 - 3a^5 - 4$

$-3a^5 - 3a^4 - 4$
LC: -3

Simplify each expression. Put your answer in standard form.

9) $(4p^2 + 7p^3 - 3p) + (8p^2 - 3p^3 + 7p)$

$4p^3 + 12p^2 + 4p$

10) $(8b^3 + 4b^4 + 2b^2) + (2b^2 - 8b + 2b^4)$

$6b^4 + 8b^3 + 4b^2 - 8b$

11) $(7 - 2x^4 + 3x) - (2 + 8x^4 - 8x)$

$-10x^4 + 11x + 5$

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

$7x^4 + 15x^3 + 2x^2 - 7x$

Find each product. Put your answer in standard form.

13) $4x^2(x^2 - 3x - 4)$

$4x^4 - 12x^3 - 16x^2$

14) $(3v + 4)(6v - 8)$

$18v^2 - 32$

15) $(n+4)(4n-6)$

$4n^2 + 10n - 24$

16) $(k+1)(2k^2 - 4k - 7)$

$2k^3 - 2k^2 - 11k - 7$

17) $(3x-8)^2$

$9x^2 - 48x + 64$

18) $(4a+5)^2$

$16a^2 + 40a + 25$

19) $(8x-3y)(8x-y)$

$64x^2 - 32xy + 3y^2$

20) $(8x-2y)(3x^2 - 7xy - 7y^2)$

$24x^3 - 62x^2y - 42xy^2 + 14y^3$

Given a rectangle with length $(2xy + 3x)$ and width $(5x^2 + 4y)$:

21) Find the perimeter of the rectangle.

$4xy + 6x + 10x^2 + 8y$

22) Find the area of the rectangle.

$10x^3y + 8xy^2 + 15x^3 + 12xy$

Given a rectangle with width $(2x + 3)$ and length $(3x^2 - 5x + 4)$:

23) What is the perimeter of the rectangle?

$6x^2 - 6x + 14$

24) What is the area of the rectangle?

$6x^3 - x^2 - 7x + 12$