Name _____ Date _____ Class _____

SECTION 7B

Ready to Go On? Quiz

7-6 Polynomials

Write each polynomial in standard form and give the leading coefficient.

1. $7x^2 + 4x^5 - 2r$ _____

2. $y^3 + 3 - 8y^2 + 4y$ _____

3. $-8w^4 - 3w + w^5$ _____

4. $3 + y + 5y^2$ _____

5. $9 + 4x^4$ _____

6. $-2a^2 + 9 + a^8 + 2a$ _____

Classify each polynomial according to its degree and number of terms.

7. $3a^2 + 4a - a^4 + 3a^3$ _____

8. $4x^2 + 8 - 3x$ _____

9. $3x^3 + 5x^2 - 1$ _____

10. $7 - 5b^4 + 2b + 5b^2$ _____

11. $7w^2$ _____

12. $3a^4 - 6a^8 + 2a + 9$ _____

13. The function $P(x) = x^3 - 3x^2 + 12$ gives the profit on a product. What is the profit on 800 units? _____

7-7 Adding and Subtracting Polynomials

Add or subtract.

14. $(12x^4 + 5x^3) + (6x^3 + 7x)$ _____

15. $(4x^2 - 3) + (10x^2 + 5x - 7)$ _____

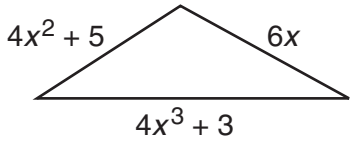
16. $(13d^6 - 4d^2) + (3d^4 + 2)$ _____

17. $(7y^3 + 5y^2) - (3y^2 + 4y)$ _____

18. $(8w^2 - 4w) - (6w^2 + 6w)$ _____

19. $(a^2 - 11) - (-6a^3 + 3a)$ _____

20. The measures of the sides of a triangle are shown as polynomials. Write a simplified polynomial to represent the perimeter of the triangle. _____



Name _____ Date _____ Class _____

SECTION 7B

Ready to Go On? Quiz continued

7-8 Multiplying Polynomials

Multiply.

21. $4h^3 \cdot 6h^6$

_____

22. $(x^9y^5)(-7x^2y^4)$

_____

23. $3mn(6m^2 + 4m^3n)$

_____

24. $(4w + 3)^2$

_____

25. $(3x^3 + 2y)(5x + y)$

_____

26. $(a^2 + 4)(3a^2 - 4a - 7)$

_____

27. Write a simplified polynomial expression for the area of a rectangle whose length is $x + 8$ units and whose width is $x - 5$ units.

_____

7-9 Special Products of Binomials

Multiply.

28. $(x + 8)^2$

_____

29. $(2x + 3)^2$

_____

30. $(3x + 7y)^2$

_____

31. $(a - 5)^2$

_____

32. $(x - y)^2$

_____

33. $(4x - 3)^2$

_____

34. $(x - 3)(x + 3)$

_____

35. $(6x - 7)(6x + 7)$

_____

36. A swimming pool has a radius of $x - 4$ inches. Write a polynomial that represents the area of the swimming pool. (The formula for the area of a circle is $A = \pi r^2$, where r represents the radius of the circle.) Leave the symbol π in your answer.

_____