

7-1 Integer Exponents

Simplify.

1. $25g^0$

2. $s^{-2}r^3$

3. $\frac{3p^{-2}g^{-3}}{2t^0}$

4. $\frac{1}{3}x^{-2}y^4$

7-3 Multiplication Properties of Exponents

Simplify.

13. $4^4 \cdot 4^{-5} \cdot 4^3$

14. $x^{-2} \cdot x^3 \cdot y^5$

15. $(-2s^2t^3)^2$

16. $(m^2n)^4 \cdot (m^4n^3)^2$

17. $(2xy^2)^4 \cdot (x^2y)^{-3}$

18. $-(r^2)^{-3} \cdot (-r^2)^3$

19. $(x^5y^2)^3$

20. $(x+2)^3 \cdot (x+2)^4$

CHAPTER 7 REVIEW CONTINUED

7-4 Division Properties of Exponents

Simplify.

21. $\frac{x^6}{x^3}$

22. $\left(\frac{4}{5}\right)^3$

23. $\frac{x^4y^3}{x^2y^4}$

24. $\left(\frac{rs^4}{r^4s^2}\right)^{-2}$

7-6 Polynomials

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

32. $-4x^2 - x^3 + 3$

33. $15y - 6 + 10y^3 - 3y^2$

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

34. $6x + 3x^2 + 1$

35. $16 - 4x^3 + 3x^2$

7-7 Adding and Subtracting Polynomials

Add or subtract.

36. $(-3y + 2) + (y^2 + 3y + 2)$

37. $(2x^2 + 3x - 4) - (x^2 + x - 1)$

38. $(-2x^3 - x + 8) - (-2x^3 + 3x - 4)$

~~39. $(-4x^3 - 2x^2 + x - 5) + (2x^3 + 3x + 4)$~~

7-8 Multiplying Polynomials

Multiply.

40. $(3x - 7)(-2x)$

41. $3x^2(5x - x^3 + 2)$

42. $(3x - 2)(5x + 7)$

~~43. $(x - 5)(2x + 10)$~~

44. $(x^2 + 9)(x^2 - x - 4)$

~~45. $(2x^2 - 7x + 1)(4x + 3)$~~

7-9 Special Products of Binomials

Multiply.

~~46. $(2x + 1)^2$~~

47. $(2 + 3y)^2$

48. $(3y - 2)^2$

~~49. $(4x + 3y)^2$~~

50. $(5x - 6)(5x + 6)$

~~51. $(4x - 7y)(4x + 7y)$~~

52. The height traveled (in feet) of a bottle rocket is modeled by $h = -16t^2 + 57t$ where t is the time in seconds. Find the height of the rocket after 2 seconds.