

Name: _____

7-2 Part 1

Exploratory Exercises

Evaluate.

1. 5^0 2. $(-3)^0$ 3. 4^{-1} 4. $(-8)^{-1}$ 5. 10^{-2} 6. $(-2)^{-3}$
 7. $(5^{-1})^2$ 8. $(3^{-2})^3$ 9. $\frac{4^{-2}}{4}$ 10. $\frac{2}{2^{-4}}$ 11. $(\frac{1}{3} \cdot \frac{1}{6})^{-1}$ 12. $(2^0 3^{-2})^{-2}$

Simplify. Remember to express the results with positive exponents. Assume no denominator is equal to zero.

13. $m^{-5}n^0$ 14. f^6g^0 15. $c^0d^{-2}e^{-1}$ 16. $x^5y^0z^{-5}$ 17. $\frac{k^9}{k^4}$ 18. $\frac{5n^5}{n^8}$
 19. $\frac{a^2b^7}{a^4}$ 20. $\frac{b^9}{b^4c^3}$ 21. $\frac{1}{x^{-1}}$ 22. $\frac{1}{r^{-4}}$ 23. $\frac{a^{-4}}{b^{-3}}$ 24. $\frac{r^{-5}}{k^{-1}}$

Written Exercises

Simplify. Assume no denominator is equal to zero.

25. $\frac{n^8}{n^5}$ 26. $\frac{w^9}{w^2c}$ 27. $\frac{x^2}{x^3}$ 28. $\frac{b^6}{b^7}$ 29. $\frac{a^0}{a^{-2}}$ 30. $\frac{1}{r^{-3}}$
 31. $\frac{k^{-2}}{k^4}$ 32. $\frac{m^2}{m^{-4}}$ 33. $\frac{an^6}{n^5}$ 34. $\frac{xy^7}{y^4}$ 35. $\frac{an^3}{n^5}$ 36. $\frac{kn^2}{n^4}$
 37. $\frac{b^6c^5}{b^3c^2}$ 38. $\frac{(-a)^4b^8}{a^4b^7}$ 39. $\frac{(-x)^3y^3}{x^3y^6}$ 40. $\frac{a^2b^2}{a^4b^5}$
 41. $\frac{12b^5}{4b^4}$ 42. $\frac{48a^3}{12a}$ 43. $\frac{12b^4}{60b}$ 44. $\frac{10m^4}{30m}$
 45. $\frac{x^3y^6}{x^3y^3}$ 46. $\frac{a^6b^3}{a^2b^9}$ 47. $\frac{a^3b^4}{a^2b^2}$ 48. $\frac{b^6c^5}{b^{14}c^2}$
 49. $\frac{w^5t^7}{w^3t^{12}}$ 50. $\frac{(-r)^5s^8}{r^5s^2}$ 51. $\frac{30x^4y^7}{-6x^{13}y^2}$ 52. $\frac{24a^3b^6}{-2a^2b^2}$
 53. $\frac{16b^4c}{-4bc^3}$ 54. $\frac{-8a^3b^7}{a^2b^6}$ 55. $\frac{22a^2b^5c^7}{-11abc^2}$ 56. $\frac{24x^2y^7z^3}{-6x^2y^3z^1}$
 57. $\frac{9xyz^6}{x^4}$ 58. $\frac{ab^5c}{ac}$ 59. $\frac{7x^3z^5}{4z^{15}}$ 60. $\frac{27a^4b^6c^9}{15a^3c^{15}}$
 61. $\frac{(a^7b^2)^2}{(a^{-2}b)^{-2}}$ 62. $\frac{r^{-5}s^{-2}}{(r^2s^5)^{-1}}$ 63. $\frac{(5r^{-1}s)^3}{(s^2)^3}$ 64. $\frac{(r^{-4}k^2)^2}{(5k^2)^2}$
 65. $(\frac{3m^2n^2}{6m^{-1}k})^0$ 66. $(\frac{-b^{-1}c^0}{4a^{-1}c^2})^0$ 67. $(\frac{7m^{-1}n^3}{n^2r^{-2}})^{-1}$ 68. $(\frac{2xy^{-2}z^4}{3xyz^{-1}})^{-2}$