

## Exponents Practice

Rewrite without any exponents.

1.  $2^2$

2.  $10^2$

3.  $9^2$

4.  $7^3$

5.  $4^3$

6.  $11^3$

7.  $5^3$

8.  $2^4$

9.  $11^5$

Rewrite using exponents.

10.  $5 \cdot 5$

11.  $16 \cdot 16$

12.  $20 \cdot 20 \cdot 20 \cdot 20 \cdot 20$

13.  $11 \cdot 11 \cdot 11 \cdot 11 \cdot 11 \cdot 11$

14.  $11 \cdot 11 \cdot 11 \cdot 11 \cdot 11 \cdot 11 \cdot 11$

15.  $5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$

16.  $8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8 \cdot 8$

17.  $9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9$

18.  $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$

Rewrite using scientific notation.

19. 400

20. 1,200

21. 1,050

22. 7,000

23. 50,000

24. 160,000

25. 352,000

26. 4,000,000

27. 83,000,000

28. 5,420,000

29. 4,000,000,000

30. 2,500,000,000

31. 56,400,000,000

32. 600,000,000,000

33. 350,000,000,000

34. Write the expression  $14 \cdot 14 \cdot 14 \cdot 14 \cdot 14$  using exponents.

35. Write the expression  $12 \cdot 12 \cdot 12 \cdot 12$  using exponents.

36. Write the expression  $\frac{2}{3} \cdot \frac{2}{3} \cdot \frac{2}{3} \cdot \frac{2}{3} \cdot \frac{2}{3} \cdot \frac{2}{3} \cdot \frac{2}{3}$  in exponential form.

37. Write the expression  $\frac{5}{8} \cdot \frac{5}{8} \cdot \frac{5}{8} \cdot \frac{5}{8} \cdot \frac{5}{8}$  in exponential form.

38. Rewrite the expression  $(-6) \cdot (-6) \cdot (-6)$  using exponents.

39. Evaluate:  $9^2$

40. Evaluate:  $5^3$

41. Evaluate:  $(-3)^2$

42. Evaluate:  $-4^2$

43. Evaluate:  $(-4)^3$

44. Evaluate:  $-3^3$

45. Evaluate:  $-4^3$

46. Evaluate:  $(0.2)^3$

47. Evaluate:  $\left(\frac{3}{4}\right)^3$

Simplify.

48.  $2^3 + 3$

49.  $7 - 2^2$

50.  $5 + 2^3$

51.  $12 - 3^2$

52.  $2^2 + 3^2$

53.  $4^2 - 2^4$

54.  $3^2 - 2^3$

55.  $2^2 + 2^3$

56.  $2 \times 4^2$

57.  $54 \div 3^2$

58.  $3^2 \div 3$

59.  $5^3$

60.  $3^5$

61.  $(-2)^6$

62.  $(-9)^2$

63.  $(-2)^5$

64.  $(-5)^3$

65.  $(-2)^7$

66.  $(-1)^7$

67.  $(-1)^{10}$

68.  $(-1)^{19}$

69.  $(-1)^{14}$

72.  $-(-9)^2$

75.  $-16^2$

78.  $(-\frac{1}{12})^2$

81.  $(-\frac{4}{3})^3$

84.  $-(-\frac{1}{2})^5$

87.  $-9^0$

90.  $[(-5)^3]^0$

93.  $(3^2 - 4)^3$

96.  $35 - 3(6 - 2)^3$

99.  $47 - 5(2 - 4)^3$

102.  $4(24 \div 8 - 6)^3$

105.  $-4[2(5 - 8)^3 + 5 \cdot 2 \cdot 6]$

108.  $[24 \div (1 - 3)^2 + 3 \cdot (-2)]^4$

111.  $(\frac{1}{3})^2 - \frac{2}{3}$

114.  $\frac{5}{32} + \frac{1}{4} \left( \frac{1}{3} - \frac{5}{6} \right)^3$

70.  $-(-11)^2$

73.  $-(-3)^3$

76.  $-2^6$

79.  $(-\frac{1}{7})^2$

82.  $-(-\frac{3}{7})^2$

85.  $(-1\frac{1}{2})^2$

88.  $-(-12)^0$

91.  $\frac{6^0}{-3}$

94.  $7(8 - 3)^2$

97.  $22 + 2(5 - 7)^4$

100.  $2(3 - 4 \cdot 2)^2$

103.  $5[(6 - 3)^2 + 4 \cdot 2]$

106.  $2[4 + 3(6 - 7)^5 + 8 \div (-4)]$

109.  $\frac{1}{6} + \left(\frac{2}{3}\right)^2$

112.  $\frac{5}{8} - \left(\frac{3}{4}\right)^2$

71.  $-(-5)^4$

74.  $-(-10)^3$

77.  $(\frac{1}{2})^5$

80.  $(-\frac{2}{5})^3$

83.  $-(-\frac{9}{11})^2$

86.  $\left(-\frac{4}{5}\right)^0$

89.  $-(0.7)^0$

92.  $-5 \cdot 3^3$

95.  $2^2 \cdot 7 - 5^2$

98.  $45 + 3(7 - 8)^5$

101.  $3(10 \div 5 - 4)^3$

104.  $-7[6 \div 2 + 3(5 - 3)^2]$

107.  $3^2 \cdot [5 + (2 - 4)^2] - 15$

110.  $\left(\frac{1}{2}\right)^3 + \frac{3}{2}$

113.  $\frac{11}{24} - \frac{1}{3} \left(\frac{5}{6} + \frac{2}{3}\right)^3$

**Answer List**

- |                                  |                                |                                             |
|----------------------------------|--------------------------------|---------------------------------------------|
| 1. $2 \cdot 2$                   | 2. $10 \cdot 10$               | 3. $9 \cdot 9$                              |
| 4. $7 \cdot 7 \cdot 7$           | 5. $4 \cdot 4 \cdot 4$         | 6. $11 \cdot 11 \cdot 11$                   |
| 7. $5 \cdot 5 \cdot 5$           | 8. $2 \cdot 2 \cdot 2 \cdot 2$ | 9. $11 \cdot 11 \cdot 11 \cdot 11 \cdot 11$ |
| 10. $5^2$                        | 11. $16^2$                     | 12. $20^5$                                  |
| 13. $11^6$                       | 14. $11^7$                     | 15. $5^7$                                   |
| 16. $8^9$                        | 17. $9^7$                      | 18. $7^8$                                   |
| 19. $4 \times 10^2$              | 20. $1.2 \times 10^3$          | 21. $1.05 \times 10^3$                      |
| 22. $7 \times 10^3$              | 23. $5 \times 10^4$            | 24. $1.6 \times 10^5$                       |
| 25. $3.52 \times 10^5$           | 26. $4 \times 10^6$            | 27. $8.3 \times 10^7$                       |
| 28. $5.42 \times 10^6$           | 29. $4 \times 10^9$            | 30. $2.5 \times 10^9$                       |
| 31. $5.64 \times 10^{10}$        | 32. $6 \times 10^{11}$         | 33. $3.5 \times 10^{11}$                    |
| 34. $14^5$                       | 35. $12^4$                     | 36. $\left(\frac{2}{3}\right)^6$            |
| 37. $\left(\frac{5}{8}\right)^5$ | 38. $(-6)^3$                   | 39. 81                                      |
| 40. 125                          | 41. 9                          | 42. -16                                     |
| 43. -64                          | 44. -27                        | 45. -64                                     |
| 46. 0.008                        | 47. $\frac{27}{64}$            | 48. 11                                      |
| 49. 3                            | 50. 13                         | 51. 3                                       |
| 52. 13                           | 53. 0                          | 54. 1                                       |
| 55. 12                           | 56. 32                         | 57. 6                                       |
| 58. 3                            | 59. 125                        | 60. 243                                     |
| 61. 64                           | 62. 81                         | 63. -32                                     |
| 64. -125                         | 65. -128                       | 66. -1                                      |
| 67. 1                            | 68. -1                         | 69. 1                                       |
| 70. -121                         | 71. -625                       | 72. -81                                     |
| 73. 27                           | 74. 1000                       | 75. -256                                    |
| 76. -64                          | 77. $\frac{1}{32}$             | 78. $\frac{1}{144}$                         |
| 79. $\frac{1}{49}$               | 80. $-\frac{8}{125}$           | 81. $-\frac{64}{27}$                        |
| 82. $-\frac{9}{49}$              | 83. $-\frac{81}{121}$          | 84. $\frac{1}{32}$                          |
| 85. $2\frac{1}{4}$               | 86. 1                          | 87. -1                                      |
| 88. -1                           | 89. -1                         | 90. 1                                       |
| 91. $-\frac{1}{3}$               | 92. -135                       | 93. 125                                     |
| 94. 175                          | 95. 3                          | 96. -157                                    |
| 97. 54                           | 98. 42                         | 99. 87                                      |
| 100. 50                          | 101. -24                       | 102. -108                                   |
| 103. 85                          | 104. -105                      | 105. -24                                    |
| 106. -2                          | 107. 66                        | 108. 0                                      |
| 109. $\frac{11}{18}$             | 110. $\frac{13}{8}$            | 111. $-\frac{5}{9}$                         |
| 112. $\frac{1}{16}$              | 113. $-\frac{2}{3}$            | 114. $\frac{1}{8}$                          |