

## EXPONENTS PRACTICE ANSWERS

Do not use a calculator. Write your answer using only positive exponents.

1. 16

2. 36

3. 1

4. 0.25

5.  $\frac{1}{4}$

6.  $\frac{1}{27}$

7. -9

8.  $\frac{1}{95172}$

9. 568

10.  $\frac{1}{49}$

11.  $\frac{1}{x^{25}}$

12.  $\frac{1}{y^2}$

13.  $y^5$

14.  $x^{11}$

15.  $x^3$

16.  $\frac{y^6}{x^2}$

17.  $x^{10}y^{10} = (xy)^{10}$

18.  $\frac{x^4}{y^3}$

19.  $x^5y^7$

20.  $xa^2b^3y^8$

21.  $a^{10}b^3$

22.  $\frac{x^3a^6}{b^{11}}$

23.  $x^2$

24.  $\frac{1}{y^2}$

25.  $\frac{x^6}{y^6} = \left(\frac{x}{y}\right)^6$

26.  $y^4x^{14}$

27.  $\frac{y^{12}}{x^2} = \left(\frac{y^6}{x}\right)^2$

28.  $xy^5z^8$

29.  $\frac{1}{yz^4}$

30.  $\left(\frac{16}{81}\right)$

31.  $\left(\frac{1}{64}\right)$

32.  $\left(\frac{36}{49}\right)$

33.  $\left(\frac{64}{81}\right)$

34.  $\left(\frac{x^6}{y^6}\right) = \left(\frac{x}{y}\right)^6$

35.  $\left(\frac{y^{12}}{x^{20}}\right) = \left(\frac{y^3}{x^5}\right)^4$

36.  $\left(\frac{4}{25}\right)$

37.  $\frac{x^6}{7^3} = \left(\frac{x^6}{343}\right)$

38.  $32x^{10}$

39.  $\left(\frac{y^{56}}{x^{32}}\right) = \left(\frac{y^7}{x^4}\right)^8$

40.  $\frac{x^8}{y^6} = \left(\frac{x^4}{y^3}\right)^2$

41.  $x^6y^3$

42.  $\frac{y^{21}}{x^{28}}$

43.  $\frac{x^7}{y^{18}}$

44.  $x^2y^4 = (xy^2)^2$

45.  $\frac{y^3}{x^3} = \left(\frac{y}{x}\right)^3$

46.  $\frac{y^4}{x^2z^{16}} = \left(\frac{y^2}{xz^8}\right)^2$

47.  $\frac{a^4y^2}{x^4z^3}$

48.  $\frac{x^7}{y^7}$

49.  $x^4$

50. 16

51.  $x^8y^8 = (xy)^8$

52.  $\frac{1}{x^{10}}$

53.  $y^{120}x^{120} = (xy)^{120}$

54.  $\left(\frac{y^{30}}{x^{12}}\right)$

55.  $x^{14}y^{13}$

56.  $\left(\frac{x^7z^{14}}{y^{56}}\right) = \left(\frac{xz^2}{y^8}\right)^7$

57.  $\frac{4^6}{2^9} = 8$

58.  $8^{xy}$

59.  $3^{2y}$

60.  $2^{28x}$

61.  $5^{21xy}$

62.  $\left(\frac{5^6z^6}{2^{12}x^6y^6}\right)$

63.  $\frac{6^4}{x^6y^4g^2}$

64.  $81a^2$

65.  $27y^3$

66.  $x^{(a+b)c}y^{(a+b)c}$

67.  $x^{(2a+c)c}y^{(3a+b)c}$

68.  $x^{14}y^{12}$