

## Practice Worksheet for Law of Exponents

Use the laws of exponents you discovered in your investigation to simplify each of the following expressions with positive exponents.

1.  $3^3 \bullet 3^4$

11.  $3^{-4}$

2.  $x^8 \bullet x^5$

12.  $\frac{8^5}{8^2}$

3.  $3x^3 \bullet 4x^2$

13.  $27^0$

4.  $x^2y^4 \bullet x^5y^{12}$

14.  $\frac{12x^5}{4x^2}$

5.  $(5^2)^3$

15.  $\frac{2x^6y^5}{16x^4y}$

6.  $(x^4)^5$

16.  $\frac{3^5}{3^7}$

7.  $(2x)^3$

17.  $\frac{4x^3y^2}{20x^3y^4}$

8.  $(x^4y^5)^3$

18.  $\frac{12xy^2}{3x^4y^2}$

9.  $(3x^4y^3z^5)^3$

19.  $\left(\frac{2x^4}{3x}\right)^3$

10.  $(2x^3)^4(-3x^2y^3)^2$

20.  $\frac{18x^{-5}y^4}{12x^{-3}y^{-3}}$