

## Exponents – Putting It All Together

Score \_\_\_\_\_ Per \_\_\_\_\_

Write each expression as a single power with a positive exponent.

1.  $(w^4)^{-3}$

2.  $(2^{-3})^{-5}$

3.  $\frac{6^5}{6^{-2}}$

4.  $m^{-3} \cdot m^6$

5. Jeb wrote  $\frac{2^2}{2^5}$  in simplified exponent form as  $2^3$ . Is Jeb's answer correct? \_\_\_\_\_ Explain. \_\_\_\_\_6.  $1,783,482^0$  is equal to \_\_\_\_\_.7. What is the difference between  $(-10)^0$  and  $-10^0$ ? \_\_\_\_\_

Write each expression in simplest form. All numbers should be evaluated and all variables should have positive exponents.

EX:  $(3^2 \cdot x^{-2})^2 = 3^4 \cdot x^{-4} = \frac{3^4}{x^4} = \left(\frac{81}{x^4}\right)$  or  $(3^2 \cdot x^{-2})^2 = \left(\frac{3^2}{x^2}\right)^2 = \frac{3^4}{x^4} = \left(\frac{81}{x^4}\right)$

8.  $2^2 \cdot 2^{-6}$

9.  $\frac{1}{4^{-3}} + n^0$

10.  $(5^{-2})^3$

11.  $(5^2 m^3)^{-1}$

12.  $\frac{4^{-2}}{4^3}$

13.  $\frac{c^{-6}}{c^{-2}}$

14.  $(3x^{-4}y^4)^3$

15.  $\frac{2m^3n^4}{m^4}$

16.  $\frac{2a^{-3}b^4}{4b^7a}$

17.  $4a^2b^2 \cdot 2a^{-3}b^2$

18.  $4x^0y^{-3} \cdot yx^3$

19.  $(x^4y^4 \cdot 2y^{-4})^0$