

## 16.2 – Laws of Exponents II

Evaluate the following.

1.  $\frac{-3^3}{-3^2} =$

2.  $\frac{4^8}{4^5} =$

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

4.  $\frac{2^7}{2^5} \cdot (2^2)^3 =$

Simplify the following.

5.  $\frac{x^7}{x^3} =$

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

7.  $\frac{3x^2y^7}{xy} =$

8.  $\frac{x^1y^5}{y^3} =$

9.  $\frac{6x^4y^5}{-2x^2y} =$

10.  $\left(\frac{2}{x^2y^3}\right)^2 =$

$$11. \frac{(3x^2y)^3}{(2xy^2)^0} =$$

$$12. \left(\frac{x^2y^4}{xy^2}\right)^7 =$$

$$13. \frac{x^{k-4}}{x^4} =$$

$$14. \left(\frac{x}{y^3}\right)^0 \left(\frac{x^5}{y^2}\right) (xy^2)^2 =$$

Use the laws of exponents to solve the following equations.

$$15. \frac{7^x}{7^5} = 7^8$$

$$16. \left(\frac{4^x}{4^3}\right)^2 = 4^{10}$$

$$17. \left(\frac{4^6}{4^x}\right)^3 = 4^6$$

$$18. \frac{7^3}{7^x} = 7^6$$