

Homework 1.3 Exponent Rules

Simplify. Your answers should contain only positive exponents.

1.  $(2m^2)(2m^3)$

2.  $(2x^3y^{-3})(2x^{-1}y^3)$

3.  $(x^2)^0$

4.  $(2x^2)^{-4}$

5.  $(2x^4y^{-3})^{-1}$

6.  $(x^2y^{-1})^2$

7.  $\frac{4x^0y^{-2}z^3}{4x}$

8.  $\frac{2x^4y^{-4}z^{-3}}{3x^2y^{-3}z^4}$

9.  $\frac{2h^3j^{-3}k^4}{3jk}$

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

11.  $\frac{3x^3y^{-1}z^{-1}}{x^{-4}y^0z^0}$

12.  $\frac{x^{-1}}{4x^4}$

**Homework** 1.3 Exponent Rules**Solutions**

Simplify. Your answers should contain only positive exponents.

1.  $(2m^2)(2m^3)$

$$= 4m^5$$

2.  $(2x^3y^{-3})(2x^{-1}y^3)$

$$= 4x^2$$

3.  $(x^2)^0$

$$= 1$$

4.  $(2x^2)^{-4}$

$$= \frac{1}{16x^8}$$

5.  $(2x^4y^{-3})^{-1}$

$$= \frac{y^3}{2x^4}$$

6.  $(x^2y^{-1})^2$

$$= \frac{x^4}{y^2}$$

7.  $\frac{4x^0y^{-2}z^3}{4x}$

$$= \frac{z^3}{y^2x}$$

8.  $\frac{2x^4y^{-4}z^{-3}}{3x^2y^{-3}z^4}$

$$= \frac{2x^2}{3yz^7}$$

9.  $\frac{2h^3j^{-3}k^4}{3jk}$

$$= \frac{2h^3k^3}{3j^4}$$

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

$$= \frac{4m^2n}{3p}$$

11.  $\frac{3x^3y^{-1}z^{-1}}{x^{-4}y^0z^0}$

$$= \frac{3x^7}{yz}$$

12.  $\frac{x^{-1}}{4x^4}$

$$= \frac{1}{4x^5}$$