Chapter 8

Exponents and Exponential Functions

Zero as an Exponent:

For every nonzero number a,

$$a^0 = 1$$

Negative Exponents:

For every nonzero number a,

$$a^{-n} = \frac{1}{a^n}$$

Reciprocal

Take a small white board

Simplify. Write your answer without negative exponents.

1. $7x^{-2} = \frac{7}{x^2}$

2. $\frac{5}{c^{-3}} = 5c^3$

3. $Q^0M^{-5}N^6 = \frac{1 \cdot N^6}{M^5} = \frac{N^6}{M^5}$

Simplify each. Write your answer without zero as an exponent or negative exponents.

1. $\frac{b^4}{w^{-7}} = b^4w^7$

$\frac{1}{w^7}$ $\frac{w^7}{1}$

2. $-4k^{-2} = \frac{-4}{k^2}$

3. $\frac{3w^{-1}}{g^{-4}} = \frac{3g^4}{w}$

4. $\frac{6x^{-3}y^7}{z^{-1}} = \frac{6y^7z}{x^3}$