

6.6 Negative Integers as Exponents

Recall: a negative exponent is like an elevator button

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

Simplify:

1. x^{-3}
 $\frac{1}{x^3}$

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

3. $\frac{x^2}{x^{-6}}$
 $x^2 \cdot x^6$
 x^8

or $x^{2-(-6)}$
 x^{2+6}
 x^8

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

5. $\frac{b^{-2}}{b^{-5}}$

$$\frac{b^5}{b^2}$$

$$b^3$$

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

$$\frac{1}{a^2b^4}$$

6. $m^{-4}n^0$ ← anything to zero power =

$$\frac{1}{m^4}$$

8. $3y^{-4}z^5$

$$\frac{3z^5}{y^4}$$

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