

NEGATIVE AND ZERO EXPONENTS

Property of Exponents:

*For every nonzero number b , $b^{-n} = \frac{1}{b^n}$.

MOVE negative exponents and their base across the fraction bar to make the exponent positive.

Simplify each expression using the rule for negative exponents.

1) $x^{-7}y^6 =$	2) $-4x^{-3}y =$
3) $11m^{-5} =$	4) $\frac{6x^2}{x^{-9}} =$

*For every nonzero number b , $b^0 = 1$.

Anything to the zero power is 1.

Simplify each expression using the rule for zero exponents.

5) $5^0 =$	6) $\left(\frac{1}{4}\right)^0 =$
7) $11m^0 =$	8) $2x^2y^0 =$

Simplify each expression.

9) $(4m^2n^{-2})(-2mn^4) =$	10) $(5a^{-3}b^{-1})(3a^2b) =$
-----------------------------	--------------------------------

11) $(4a^{-4})^3 =$

12) $\frac{-24a^{-3}b^4}{6a^{-5}b^2c^0} =$

13) $(x^2y^{-2}z^0)(-3x^{-2}y^3z)^2 =$

14) $(2mn^{\frac{1}{2}})^2(3m^{-3})^2 =$

15) Which expression is equivalent to $\frac{10x^{-4}y^5z^{10}}{12x^{-2}y^2z^{-5}}$?

A. $\frac{5y^3}{6x^2z^{15}}$

C. $\frac{5x^6y^3}{6z^{15}}$

B. $\frac{2y^3}{x^6z^{15}}$

D. $\frac{5y^3z^{15}}{6x^2}$