Extended Algebra 1   Name:_____

Exponents Review Worksheet

1. Write each number in scientific notation.

    (a) $324,000,000$ **(b)** 0.000567 **(c)** 0.005 **(d)** $205,000,000$

2. Write each number in standard form.

    (a) 1.03×10^{-4} **(b)** 2.5×10^{6} **(c)** 5×10^{-3} **(d)** 5×10^{3}

H.1A.4: I can simplify expressions: using product of like bases, using power to a power, using quotient of like bases, using product to a power, using quotient to a power, using the zero exponent property, and containing negative exponents.

3. Simplify each expression. Write your answers with <u>no negative exponents</u>.

    (a) $x^2 \cdot x^4$ **(b)** $(x^2)^4$ **(c)** $\frac{x^2}{x^4}$ **(d)** $\frac{x^4}{x^2}$

    (e) $(4x)^2$ **(f)** $(-3x)^3$ **(g)** $(a^6b^2c)(a^2bc^4)$ **(h)** $(-3xy^2)(2x^3y)$

    (i) $(4x^2)^2$ **(j)** $(5ab^3)^2$ **(k)** $\frac{x^{-2}}{x^{-3}}$ **(l)** $\frac{x^{-3}}{x^{-2}}$

    (m) $\frac{x^3}{x^{-2}}$ **(n)** $\frac{x^{-2}}{x^3}$ **(o)** $(-3x^2y^{-3})^0$ **(p)** $\frac{24a^{-2}b^3c^{-3}}{-8a^4b^6c^{-4}}$