

Section 5.6

Example 1 – Simplify:

a) $(-628)^0 =$

b) $(x^2y^4)^0$

Example 2 – Simplify:

a) x^{-6}

b) $\frac{1}{x^{-4}}$

c) $\left(\frac{2}{3}\right)^{-2}$

Example 3 – Simplify:

a) $\frac{x^2}{x^5}$

b) $\frac{a^{-3}}{a^{-7}}$

c) $\frac{y^{-5}}{y^{-2}}$

Example 4 – Simplify:

a) $2^{-4} \cdot 2^6$

b) $\frac{10^2}{10^{-2}}$

c) $(2^{-3})^{-2}$

Example 5 – Simplify:

a) $a^{-4}a^{-3}$

b) $(x^{-2}y^4)^{-3}$

Example 6 – Simplify:

a) $(4x^{-2})(3x^{-1})$

b) $\left(\frac{12x^{-6}}{6x^{-2}}\right)^{-2}$

Example 7 – Write in scientific notation:

a) 0.000179

b) 8175

Example 8 – Evaluate: $(4000)(0.000012)$ using scientific notation

Example 9 – Evaluate: $\frac{(6000)(0.00008)}{(40,000)(0.006)}$ using scientific notation.