

**MAT0028 ~ Lesson 24**

Work the following examples as you listen to the recorded lecture.

**Exponents**

$2^3$

$(-3)^6$

$5x^2$

$(5x)^2$

Example 1:

Example 2:

Example 3:

Example 4:

$(-3)^2$

$-3^2$

$(-\frac{1}{9})^2$

$(-4) \cdot 3^3$

Multiply the same base by adding exponents:

Example 5:  $(-5)^7 \cdot (-5)^6$

Example 6:  $(-2z^3)(-2z^2)$

Example 7:  $(a^2b)(a^{13}b^{17})$

Example 8:  $(12x^2)(-x^6)(x^4)$

Raise an exponent to a power by multiplying exponents:

Example 9:  $(x^7)^5$

Example 10:  $(\frac{xy}{7})^2$

Divide the same base by subtracting exponents:

Example 11:  $\frac{y^{10}}{y^9}$

Example 12:  $\frac{x^8y^6}{xy^5}$

Anything with an exponent of zero equals 1.

Example 13:  $23^0$

Example 14:  $-2x^0$