Vocabulary: Multiplying Exponential Expressions

Vocabulary

- Base – a number or expression raised to an exponent.
  - For example, in the expression 5^3, 5 is the base.
- Exponent – a number, written to the right of and just above a number or expression, that indicates how many times the number or expression is multiplied by itself.
  - For example, in the expression 5^3, 3 is the exponent.
  - The expression 5^3 equals $5 \bullet 5 \bullet 5$, or 125.
  - *Power* is another name for exponent.
    - For example, 6^5 is read "6 to the fifth power."
  - The exponents 2 and 3 have special names – 2 is "squared" and 3 is "cubed."
    - For example, 4^2 is read "four squared."
    - For example, 4^3 is read "four cubed."
  - A negative exponent means to divide by that many factors.
    - For example, 5^{-3} means $\frac{1}{5^3} = \frac{1}{125}$.
  - A number raised the zero power equals 1.
    - For example, $5^0 = 1$.
- Expression – a combination of one or more numbers, one or more variables, and one or more arithmetic operations.
  - For example, $x - 2$, $8m$, $r \div 6$, 7, $3x + 4$, $9x^3y^2$ and $(2 + (\frac{5}{11})^2 - 0.3)$ are all expressions.