Rules for Exponents

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| ***Name of Rule*** | **In Words** | **In Symbols** | **In Numbers** |
| *Zero Exponent Rule* | Anything raised to the zero power is 1 | a0 = 1 | 20 = 1 |
| *Power Rule* | To raise a power to another power, multiply the exponents | (am)n = am×n | (22)3 = 22×3 = 26 = 64 |
| *Negative Exponent Rule* | Negative exponents in the numerator move to the denominator and become positive; negative exponents in the denominator move to the numerator and become positive | a-m = 1  am | 2-1 = 1 = ½  21 |
| *Product Rule* | To multiply two exponents with the same base, keep the base and add the powers | am × an = am + n | 22 × 23 = 22+3 = 25 = 32 |
| *Quotient Rule* | To divide two exponents with the same base, keep the base and subtract the exponents  (numerator – denominator) | am / an = am – n | 23 = 23 – 2 = 21 = 2  22 |