Fractional Exponents vs Radicals

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Use of radicals may sometimes be avoided by substituting a fractional exponent: (a2-b2)1/2instead of a2-b2.As with unstacking fractions, if clarity is sacrificed by making the equation fit within the text, it is preferable to set it off. For example, E = 1.96 {[P (1 - P)]/m}1/2 fits within the text, but the centered E=1.96P(1-P)mmight be more easily understood.

Negative Exponents

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A negative exponent denotes the reciprocal of the expression, as illustrated in these examples: x-n= 1/xn A-1 = 1/A B-2 = 1/B2A negative exponent may simplify some expressions within running text:A(x+y)2 may also be written as A(x+y)-2 or A/(x+y)2

Logarithmic Expressions

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The term log is an abbreviation of logarithm. A system of logarithms may be based on any number, although logarithmic systems based on the numbers 10, 2, and the irrational number e are most common. The base should be subscripted and follow the word log. In the following examples, note that logarithms are always computed from exponents of the number that forms their basis.log10 1000 = 3 (because 1000 = 103) log2 8 = 3 (because 8 = 23)Logarithms based on e (which is approximately 2.71) are called natural logarithms and are often represented as ln.ln 2.71 = 1The terms