

Abstract Submitted
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Advances in Energy and Integral Area Calculations BRETTE DELAHOUSSAYE, Los Angeles Unified School District, Calcgate Software — A transform function, and new additional theorem, allows work and energy, to be calculated for any constant, or time-varying force function, in integral form, as a function of time. In addition, the work $W = \int f(x) dx$, and corresponding change in kinetic energy ΔK , of an object or particle, with a time-varying mass $m(t)$, can be determined using the transform function. The individual work, and change in kinetic energy, can be calculated for the vector component(s), which make-up a resultant force function, when more than one force vector component simultaneously do work on an object or particle, along the same axis, using the transform function, and new additional theorem.

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