



























(1)  $\frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = m v \frac{dv}{dt} = m v a$   
 $\frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = \frac{d}{dt} (m v) v = m \frac{dv}{dt} v = m a v$   
 $\frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = m a v$

(2)  $\frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = m v \frac{dv}{dt} = m v a$   
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