

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

[illegible]