


Alternate Expressions for Tangential Components of Acceleration

$$a_{\tau} = \frac{dv}{dt} = \frac{dv}{ds} \frac{ds}{dt} = \frac{dv}{ds} v = \frac{d}{ds} \left[\frac{1}{2} v^2 \right]$$


$$a_{\tau} = \frac{dv}{dt}$$

$$a_{\tau} = \frac{d}{ds} \left[\frac{1}{2} v^2 \right]$$