

Derivative as a Rate of Change

Average rate of change

Velocity – (instantaneous velocity)

Average velocity =

Velocity –

Speed –

Jerk –

Ex.  $s = \frac{t^4}{4} - t^3 + t^2 \quad 0 \leq t \leq 3$

Try It:  $s = -t^3 + 3t^2 - 3t \quad 0 \leq t \leq 3$