

Comparison of Scalar and Vector Quantities

Type of Quantity	Examples	Symbol and Base Unit	Formula or Measurement
Scalar	time in seconds	$t \text{ (s)}$	<i>measurement</i>
	elapsed time	$\Delta t \text{ (s)}$	$\Delta t = t_2 - t_1$
	mass in kilograms	$m \text{ (kg)}$	<i>measurement</i>
	distance in metres	$d \text{ (m)}$	<i>measurement</i>
	speed in metres per second	$v \text{ (m/s)}$	$v_{avg} = \Delta d / \Delta t$
Vector	position in metres	$\vec{d} \text{ (m)}$	<i>measurement</i>
	displacement in metres	$\overrightarrow{\Delta d} \text{ (m)}$	$\overrightarrow{\Delta d} = \vec{d}_2 - \vec{d}_1$
	velocity in metres per second	$\vec{v} \text{ (m/s)}$	$\vec{v}_{avg} = \frac{\overrightarrow{\Delta d}}{\Delta t}$
	change in velocity	$\overrightarrow{\Delta v} \text{ (m/s)}$	$\overrightarrow{\Delta v} = \vec{v}_2 - \vec{v}_1$
	acceleration in metres per second squared	$\vec{a} \text{ (m/s}^2\text{)}$	$\vec{a} = \frac{\overrightarrow{\Delta v}}{\Delta t}$
	force in Newtons	$\vec{F} \text{ (N)}$	$\vec{F}_{net} = m\vec{a}$