Acceleration

A car starts from rest and attains a constant velocity, say, 50 km/hr. It runs at that velocity for some time. The driver now wants to slow down the car and hence reduces the velocity, so that finally it becomes zero. The various changes in velocity are expressed in terms of acceleration. It is therefore, defined as the rate of change of velocity of a body.

Acceleration = Change in velocity/Time Acceleration = (Final velocity - Initial velocity)/Time

Acceleration (a) = (v - u) / t

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$Acceleration = \frac{Final velocity - Initial velocity}{Time}$

Acceleration is a vector quantity. Its S.I unit is meter $per(second)^2$ i.e (m/s²).