

Dimensions of Quantities

Quantity	Formula	Dimensions	Units
Speed	$v = d/t$	$[v] = LT^{-1}$	ms^{-1}
Volume of sphere	$\frac{4}{3}\pi r^3$	$[V] = L^3$	m^3
Angle	$\theta = (\text{arc length})/\text{radius}$	1	Radians
Acceleration			
Force			
Work			
Density			
Pressure			
G.P.E.			
Kinetic Energy			
Power			

Dimensions of Quantities - **Answers**

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Speed	$v = d/t$	$[v] = LT^{-1}$	ms^{-1}
Volume of sphere	$4/3\pi r^3$	$[V] = L^3$	m^3
Angle	$\theta = (\text{arc length})/\text{radius}$	1	Radians
Acceleration	$a = \frac{v-u}{t}$	$[a] = LT^{-2}$	ms^{-2}
Force	$F = ma$	$[F] = MLT^{-2}$	Newtons
Work done	$\text{work done} = Fs$	$[\text{work done}] = MLT^{-2}L = ML^2T^{-2}$	Joules
Density	$\text{Density} = \frac{\text{mass}}{\text{volume}}$	$[\text{Density}] = ML^{-3}$	Kg/m^3
Pressure	$\text{Pressure} = \frac{\text{Force}}{\text{area}}$	$[\text{Pressure}] = MLT^{-2}L^{-2} = ML^{-1}T^{-2}$	Pa
G.P.E.	$GPE = mgh$	$[GPE] = ML^2T^{-2}$	Joules
Kinetic Energy	$KE = \frac{1}{2}mv^2$	$[KE] = M(LT^{-1})^2$	Joules
Power	$P = \frac{Fs}{t} = Fv$	$[P] = MLT^{-1}$	Watts

*Watt ain't no country I ever heard of, they speak English in Watt?