**Dimensions of Quantities**

|  |  |  |  |
| --- | --- | --- | --- |
| Quantity | Formula | Dimensions | Units |
| Speed | $$v=d/t$$ | $$\left[v\right]=LT^{-1}$$ | ms-1 |
| Volume of sphere | $$4/3πr^{3}$$ | $$\left[V\right]=L^{3}$$ | m3 |
| Angle | $$θ=(arc length)/radius$$ | 1 | Radians |
| Acceleration |  |  |  |
| Force |  |  |  |
| Work |  |  |  |
| Density |  |  |  |
| Pressure |  |  |  |
| G.P.E. |  |  |  |
| Kinetic Energy |  |  |  |
| Power |  |  |  |

**Dimensions of Quantities - Answers**

|  |  |  |  |
| --- | --- | --- | --- |
| Quantity | Formula | Dimensions | Units |
| Speed | $$v=d/t$$ | $$\left[v\right]=LT^{-1}$$ | ms-1 |
| Volume of sphere | $$4/3πr^{3}$$ | $$\left[V\right]=L^{3}$$ | m3 |
| Angle | $$θ=(arc length)/radius$$ | 1 | Radians |
| Acceleration | $a=\frac{v-u}{t}$  | $$\left[a\right]=LT^{-2}$$ | ms-2 |
| Force | $$F=ma$$ | $$\left[F\right]=MLT^{-2}$$ | Newtons |
| Work done | $$work done=Fs$$ | $$\left[work done\right]=$$$$MLT^{-2}L= ML^{2}T^{-2}$$ | Joules |
| Density | $$Density=\frac{mass}{volume}$$ | $$\left[Density\right]=ML^{-3}$$ | Kg/m3 |
| Pressure | $$Pressure=\frac{Force}{area}$$ | $$\left[Pressure\right]=$$$$MLT^{-2}L^{-2}=ML^{-1}T^{-2}$$ | Pa |
| G.P.E. | $$GPE=mgh$$ | $$\left[GPE\right]=ML^{2}T^{-2}$$ | Joules |
| Kinetic Energy | $$KE=\frac{1}{2}mv^{2}$$ | $$[KE]=M\left(LT^{-1}\right)^{2}$$ | 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?