1.1.1 Derived Units

Complete this table. I recommend using a pencil, than after checking for mistakes, ink in the table. Remember the derived unit must only use the 7 base units. If the derived unit has a name then also include this in the table, e.g. J, N, Pa.

Quantity	Defining Equation	Derived S.I. Unit	Name of Unit if Applicable
Area	length x width	$m \times m = m^2$	-
Volume	length x width x height	$m \times m \times m = m^3$	-
Density	mass / volume	$kg / m^3 = kgm^{-3}$	-
Velocity	displacement / time	$m / s = ms^{-1}$	-
Acceleration	velocity / time	$ms^{-1} / s = ms^{-2}$	-
Force	mass x acceleration	$kg \times m\ s^{-2} = kg\ m\ s^{-2}$	N (Newton)
Work	force x distance	$kg\ m\ s^{-2} x\ m = kg\ m^2\ s^{-2}$	J
Kinetic Energy	½ x mass x velocity^2	$kg \times (ms^{-1})^2 = kg\ m^2\ s^{-2}$	J
Gravitational Potential Energy	mass x gravity x height	$kg \times ms^{-2} \times m = kg\ m^2\ s^{-2}$	J
Power	energy / time	$kg\ m^2\ s^{-2} / s = kg\ m^2\ s^{-3}$	W
Momentum	mass x velocity	$kg \times ms^{-1} = kg\ m\ s^{-1}$	-
Impulse	force x time	$kg\ m\ s^{-2} \times s = kg\ m\ s^{-1}$	-
Pressure	force / area	$kg\ m\ s^{-2} / m^2 = kg\ m^{-1}\ s^{-2}$	Pa
Electric charge	current x time	$A \times s = As$	C
Potential Difference	energy / charge	$kg\ m^2\ s^{-2} / As = kg\ m^2\ As^{-3}$	V
Resistance	potential difference / current	$kgm^2As^{-3} / A = kgm^2A^{-2}s^{-3}$	Ω
Electrical Power	potential difference x current	$kgm^2As^{-3} \times A = kg\ m^2\ s^{-3}$	W
Period of Oscillation	time	s	-
Frequency	1 / time	s^{-1}	Hz
Wavelength	length	m	-