SI Base Units

The SI base units and their physical quantities are:

- meter for length.
- kilogram for mass.
- second for time.
- ampere for electric current.
- kelvin for temperature.
- candela for luminous intensity.
- mole for the amount of substance.

(At AS you are only likely to encounter the first four.)

You need to be able to convert any unit into SI base units. You can do this using a formula or combination of formulae that you know (or find on the formula sheet....)

E.g. what are the following in SI Base Units?

a) newtons

force = mass x acceleration   so $N = kg\ ms^{-2}$ DONE – kg, m and s are all base units.

b) joules

work = force x dist   so   J = Nm   NOT THERE YET – newtons are not base units.

Need to convert N to base units. We just did this. So

$J = Nm = kg\ ms^{-2}$ x m = $kg\ m^2 s^{-2}$ DONE – all base units now.

Task: convert the following to base units:

a) watts

b) hertz

c) newton seconds

d) volts

e) coulombs

f) ohms