N5 Physics Quantity, Symbol, Unite Unit Synabol

## 'd' as in $v=\frac{d}{t}$ $t$

## -distance

-metre
-m
>scalar


# 's' as in $\mathrm{V}=\frac{s}{t}$ 

## displacement

 -metre-m

- vector



# 't' as in $a=\frac{v-u}{t}$ $t$ 

## -Time for the change -second

-s
-scalar


$$
\text { ' } \mathrm{a} \text { ' as in } a=\frac{v-u}{t}
$$

## -Acceleration

- metres per second squared
$-\mathrm{ms}^{-2}$ or m/s ${ }^{2}$
- vector

' $v$ ' as in $a=\frac{v-u}{t}$
-Final velocity
- metres per second
$\rightarrow \mathrm{ms}^{-1}$ or $\mathrm{m} / \mathrm{s}$
- vector


$$
\text { ' } u \text { ' as in } a=\frac{v-u}{t}
$$

- Initial/starting velocity
- metres per second
$\rightarrow \mathrm{ms}^{-1}$ or $\mathrm{m} / \mathrm{s}$
- vector



## $' \Delta v '$ as in $a=\frac{\Delta v}{t}$

-Change in velocity
-metres per second

- $\mathrm{ms}^{-1}$ or m/s
- vector



## ' $\bar{v}$ ' as in $s=\bar{v} t$

## -Average velocity

-metres per second
$\rightarrow \mathrm{ms}^{-1}$ or m/s

- vector



## $' \bar{v} '$ as in $d=\bar{v} t$

-Average speed
-metres per second
ms ${ }^{-1}$ or m/s
-scalar


## ${ }^{\prime} \Delta \mathrm{v}$ ' as in $a=\frac{\Delta v}{t}$

-Change in velocity
-metres per second

- $\mathrm{ms}^{-1}$ or m/s
- vector



## ' $F$ ' as in $F=m a$

-force
-Newton
-N

- vector



## ' $m$ ' as in $F=m a$

## $>$ mass

-kilogram
-kg
-scalar


## 'g' as in $W=m g$

-Acceleration due to gravity/ gravitational field strength
-metres per second squared/ newtons per kilogram
$-\mathrm{ms}^{-2}$ or $\mathrm{m} / \mathrm{s}^{2}$ or $\mathrm{Nkg}^{-1}$
vector


## 'W' as in $W=m g$

## -Weight or (Force of gravity) <br> -Newton

-N

- Vector
- Never use gravity alone in an exam


$$
\text { ' } E_{p}^{\prime} \text { ' as in } E_{p}=m g h
$$

## -(gravitational) potential Energy <br> -Joule

-J (must look like a capital)
-scalar
'h' as in $E_{p}=m g h$
-height

- metre
-m
-scalar


$$
\text { ' } E_{k}^{\prime} \text { as in } E_{k}=\frac{1}{2} m v^{2}
$$

-Kinetic Energy -Joule
-J (must look like a capital)
-scalar


## $' v$ ' as in $E_{k}=\frac{1}{2} m v^{2}$

## $\rightarrow$ speed

- metres per second
- $\mathrm{ms}^{-1}$ or $\mathrm{m} / \mathrm{s}$
-scalar



## ' $E_{\mathrm{w}}$ ' or $W$ as in $E_{w}=F d$

-Work done
-Joule

- J (must look like a capital)
-scalar



## 'F' as in $E_{w}=F d$

force
-Newton
-N

- vector



## 'Q' as in $Q=I t$

-charge
-coloumb
-C
-scalar


## ' $V$ ' as in $V=I R$

## > voltage

> volt

- V
-scalar



## 'I' as in $V=I R$

## -current

- ampere
- A
-scalar



## ' R ' as in $V=I R$

## -resistance

>ohm

- $\Omega$
-scalar


$$
\boldsymbol{V}_{\mathbf{2}} \text { as in } \boldsymbol{V}_{\mathbf{2}}=\left(\frac{\boldsymbol{R}_{\mathbf{2}}}{\boldsymbol{R}_{\mathbf{1}}+\boldsymbol{R}_{\mathbf{2}}}\right) V_{s} \quad 26
$$

- Voltage across resistor 2 - Volt - V
scalar


$$
\boldsymbol{R}_{\mathbf{2}} \text { as in } \boldsymbol{V}_{\mathbf{2}}=\left(\frac{\boldsymbol{R}_{\mathbf{2}}}{\boldsymbol{R}_{\mathbf{1}}+\boldsymbol{R}_{\mathbf{2}}}\right) V_{s}
$$

Resistance of resistor 2
>ohm

- $\Omega$
-scalar


$$
\boldsymbol{V}_{s} \text { as in } \boldsymbol{V}_{\mathbf{2}}=\left(\frac{\boldsymbol{R}_{\mathbf{2}}}{\boldsymbol{R}_{\mathbf{1}}+\boldsymbol{R}_{\mathbf{2}}}\right) V_{s}{ }^{28}
$$

-Supply Voltage
-Volt

- V
-scalar

$\boldsymbol{R}_{T}$ as in $\frac{1}{R_{T}}=\frac{1}{R_{1}}+\frac{1}{R_{2}}$


## -Total Resistance in parallel <br> >ohm

- $\Omega$
-scalar

$' V_{1}^{\prime}$ ' as in $\frac{V_{1}}{R_{1}}=\frac{V_{2}}{R_{2}}$
-Voltage across resistor 1
- Volt
- V
-scalar



## ' $\mathrm{R}_{\mathrm{T}}$ ' as in $\frac{1}{R_{T}}=\frac{1}{R_{1}}+\frac{1}{R_{2}}+\ldots{ }^{31}$

Total resistance of resistors in parallel >ohm

- $\Omega$
>scalar


## ' $\mathrm{R}_{\mathrm{T}}$ ' as in $\boldsymbol{R}_{\boldsymbol{T}}=\boldsymbol{R}_{\mathbf{1}}+\boldsymbol{R}_{\mathbf{2}}+\cdots$

## -Total resistance of resistors in series <br> >ohm

- $\Omega$
>scalar


## 'E' as in $E=Q V$

- Energy
- Joule
- J (must look like a capital)
-scalar



## 'Q' as in $E=Q V$

## -charge

-coloumb
-
-scalar

' P ' as $\operatorname{in} P=\frac{E}{t}$

- Power
-Watt (yes Watt is the unit of power)
-W
scalar



## ' $P$ ' as in $P=I V$

## - power

-Watt (yes Watt is the unit of power!)
-W
-scalar


## 'I' as in $P=I^{2} R$

## -current

- ampere
- A
-scalar



## $' V$ ' as in $P=\frac{V^{2}}{R}$

## - voltage

 - Volt- V
-scalar



## ' $E_{H}$ ' as in $E_{H}=c m \Delta T$

-Heat Energy

- Joule
-J (must look like a capital)
-scalar



## 'c' as in $E_{H}=c m \Delta T$

-Specific heat capacity
-Joules per kilogram per degree Celsius or
-Joules per kilogram per keluin
$-\mathrm{Jkg}^{-1}{ }^{\circ} \mathrm{C}^{-1}$ or J $\mathrm{kg}^{-1} \mathrm{~K}^{-1}$
-scalar


## ' $\Delta \mathrm{T}$ ' as in $E_{H}=c m \Delta T$

Change in temperature
degree Celsius or Keluin
${ }^{\circ} \mathrm{C}$ or K
Scalar
NB It is a change of temperature a change of 1 K is the same as a change of $1^{\circ} \mathrm{C}$

## ' $E_{H}$ ' as in $E_{H}=m l$

-Heat energy required to change the state of a substance
-Joule
-J (must look like a capital)
-scalar


## '1' as in $E_{H}=m l$

-Specific latent heat
-Joules per kilogram

- Jkg ${ }^{-1}$ or J/kg
-scalar



## ' A ' as in $\mathrm{p}=\frac{F}{A}$

## sarea

## square metre

$\mathrm{m}^{2}$
-Scalar

- It is incorrect to say metres square or metres squared!
' A ' as in $\mathrm{p}=\frac{F}{A}$


## - area

Square metre
${ }^{\text {m }}{ }^{2}$
-scalar


## ' O ' as in $\mathrm{P}=\frac{F}{A}$

-pressure
-Pascal or Newton per square metre

- Pa
-scalar



## ' P ' as in $p=\frac{F}{A}$

-Pressure
-Pascals
-Pa or ( $\mathrm{Nm}^{-2}$ )
-scalar


# $\mathrm{P}_{1}^{\prime}$ as in $p_{1} V_{1}=p_{2} V_{2}$ 

-Original Pressure
-Pascals
-Pa or ( $\mathrm{Nm}^{-2}$ )
-scalar


$$
\text { ' } \mathrm{T}_{1}^{\prime} \text { as in } \frac{p_{1}}{T_{1}}=\frac{p_{2}}{T_{2}}
$$

-Original temperature (try to remember to put K in brackets!) $\frac{p_{1}}{T_{1}(K)}=\frac{p_{2}}{T_{2}(K)}$
-Keluin
-K
-scalar

' $T$ ' as in $\frac{p V}{T}=$ constant
-temperature
-Keluin
-K
-scalar

${ }^{\prime} \mathrm{V}_{2}$ ' as in $\frac{V_{1}}{T_{1}}=\frac{V_{2}}{T_{2}}$
final volume $\frac{V_{1}}{T_{1}(K)}=\frac{V_{2}}{T_{2}(K)}$

## -cubic metres

$\mathrm{m}^{3}$
-Scalar
/4

- NB It is not said metres cubed, this is incorrectd an


## 'f' as in $f=\frac{N}{t}$

-frequency
-Hertz

- Hz
-scalar



# ' $N$ ' as in $f=\frac{N}{t}$ 

## -Number of waves

## -No units

-scalar
-Wavelength of the wave
-metre
-m
-scalar

-Frequency of the wave - Hertz

- Hz
-scalar



## -Speed of the wave

-metres per second
ms ${ }^{-1}$ or m/s
-scalar


## 'f' as in $T=\frac{1}{f}$

-frequency

- Hertz
- Hz
-scalar



## 'T' as in $T=\frac{1}{f}$

period
-second
-S
-scalar


## ' $N$ ' as in $A=\frac{N}{t}$

## -Number of disintegrations -No unit



## 'A' as in $A=\frac{N}{t}$ $t$

## -Activity

- Becquerels
-Bq
-scalar



## 'D' as in $D=\frac{E}{n}$ <br> $m$

## -Absorbed Dose

-Gray
$>$ Gy (often mGy, $\mu \mathrm{Gy}$, usually no need to covert)
-scalar


## 'E' as in $D=\frac{E}{m}$ <br> $m$

- Energy
-Joule
- J (must look like a capital)
-scalar



## 'm' as in $D=\frac{E}{m}$ <br> $m$

## $>$ mass

-kilogram
-kg
-scalar


$$
\text { 'H' as in } \mathrm{H}=D w_{r}
$$

-Equivalent Dose
-Sievert

- Su (often mSu, $\mu \mathrm{Su}$, usually no need to covert)
-scalar


## 'H' as in $\dot{H}=\frac{\mathrm{H}}{t}$

- Equivalent Dose rate
-Sievert per hour or year or day etc
-Suh ${ }^{-1}$, Suy ${ }^{-1}$ (often mSu, $\mu$ Su , usually no need to covert)
-scalar


