

Finding the right equation – help sheet

This sheet can be used with the video “Finding the right equation”.

Use the following method...

1. Listen to the full question then pause the video when told to
2. Use the table to note the symbols for each quantity mentioned
3. Find an equation in the relationship sheet which includes the symbols you have noted
4. Play the video to see if you were correct



Video link

Note: the quantities in ***bold italics*** can be found in the data sheet which is part of the examination paper.

The QR code links to the video on YouTube.

Quantity	Symbol	Unit	
absorbed dose	<i>D</i>	Gy	grays
acceleration	<i>a</i>	ms ⁻²	metres per second per second
activity	<i>A</i>	Bq	becquerels
area	<i>A</i>	m ²	metres squared
average velocity	\bar{v}	ms ⁻¹	metres per second
change in temperature	ΔT	°C	degrees Celsius
charge	<i>Q</i>	C	coulombs
current	<i>I</i>	A	amps
distance	<i>d</i>	m	metres
displacement	<i>s</i>	m	metres
energy	<i>E</i>	J	joules
equivalent dose	<i>H</i>	Sv	sieverts
equivalent dose rate	\dot{H}	Sv s ⁻¹ etc...	(many possible units)
final velocity (or speed)	<i>v</i>	ms ⁻¹	metres per second
force	<i>F</i>	N	newtons
frequency	<i>f</i>	Hz	hertz

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gravitational field strength	g	N kg^{-1}	newtons per kilogram
heat energy	E_h	J	joules
height	h	m	metres
initial velocity (or speed)	u	ms^{-1}	metres per second
kinetic energy	E_k	J	joules
mass	m	kg	kilograms
number of radioactive nuclei decaying	N		(no units)
number of waves	N		(no units)
period	T	s	seconds
potential difference – see ‘voltage’			
potential energy	E_p	J	joules
power	P	W	watts
pressure	p	Pa	pascals
radiation weighting factor	ω_R		(no units)
resistance	R	Ω	ohms
specific heat capacity	c	$\text{J kg}^{-1} \text{ }^\circ\text{C}^{-1}$	joules per kilogram per degree Celsius
specific latent heat	l	J kg^{-1}	joules per kilogram
supply voltage	V_s	V	volts
temperature	T	K	kelvin
time	t	s	seconds
total resistance	R_T	Ω	ohms
velocity (or final velocity)	v	ms^{-1}	metres per second
voltage	V	V	volts
volume	V	m^3	metres cubed
wavelength	λ	m	metres
weight	W	N	newtons
work done	E_w	J	joules