Convert the figures into the units required.

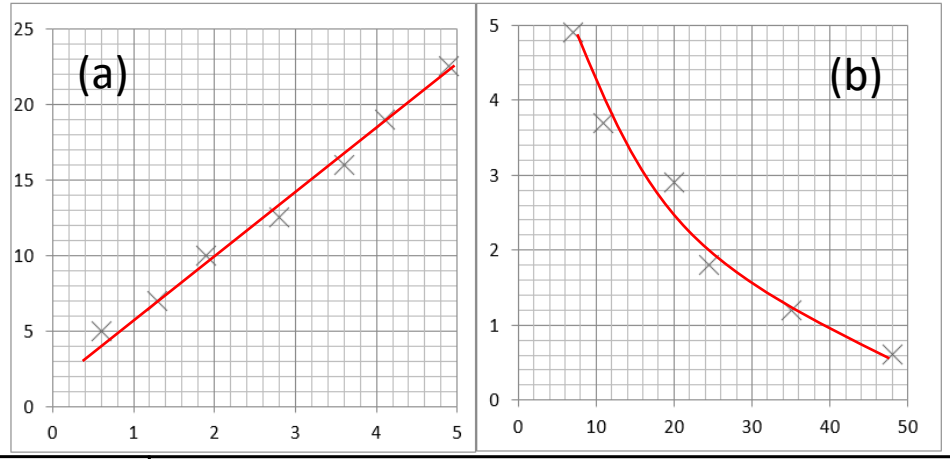
6 km	=	6×10^3	m
54 MN	=	5.4×10^7	N
0.086 µV	=	8.6×10^{-8}	V
753 GPa	=	7.53×10^{11}	Pa
23.87 mm/s	=	0.02387	m/s

Convert these figures to suitable prefixed units.

640	GV	=	640×10^9	V
$0.5\ \mu A$		=	0.5×10^{-6}	A
$93.09\ Gm$		=	93.09×10^9	m
3200	kN	=	32×10^5	N
2.4	nm	=	0.024×10^{-7}	m

PHYSICS SKILLS REVISION PLACEMAT

Draw an appropriate line of best fit on each graph. Calculate the gradient of the line for graph (a). Estimate the gradient of graph (b) at x=20



Rearrange each equation into the subject shown in the middle column.

Equation		Rearrange Equation
$V = IR$	R	$R = \frac{V}{I}$

Equation		Rearrange Equation
$v^2 = u^2 + 2as$	s	$s = \frac{v^2 - u^2}{2a}$

Equation		Rearrange Equation
$pV = kT$	k	$k = \frac{pV}{T}$

Equation		Rearrange Equation
$p = h\rho g$	h	$h = \frac{p}{\rho g}$

Describe the following types of error:

Random error – *Different each time. Minimise impact by repeating, removing anomalies and calculating mean values*

Systematic error – *Same each time. Correct by adding or subtracting the same value from each measurement*

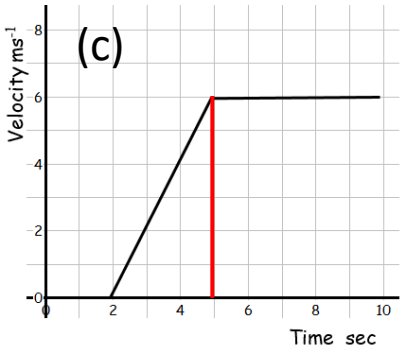
Zero error – *Equipment not reset to zero before use*

Calculate the area under graph (c)

$Area = triangle + rectangle$

$Area = (0.5 \times 2 \times 6) + (5 \times 6)$

$Area = 36$



Calculate the mean of the values below then write the answer to the appropriate number of significant figures

Value 1	Value 2	Value 3	Mean Value	Uncertainty
1	1	2	1	0.5
435	299	357	364	68
3.038	4.925	3.600	3.854	0.944
0.00040	0.00039	0.00038	0.00038	0.00001

In addition, state the uncertainty in each measurement.