



Describing a quantity

Writing a measurement correctly: symbol, value, unit.



1 What is a quantity?



A physical quantity is a property of nature that can be measured with an instrument, or calculated with a formula.

2 Writing a measurement

A measurement is always written with these three parts:

symbol = **value** **unit**



How it is obtained: with a measuring instrument, or with a formula.

3 Examples



Mass:

m = **35** **g**

measured with a balance



Speed:

v = **70** **km/h**

calculated with a formula

4 The International System (IS)

Reminder: the seven base units are the same for every scientist in the world.

Quantity	Length	Mass	Time	Electric current	Temperature	Amount of substance	Luminous intensity
Unit	metre	kilogram	second	ampere	kelvin	mole	candela
Symbol	m	kg	s	A	K	mol	cd

5 Some useful quantities at school

Quantity	Symb.	Unit	Symb.	Quantity	Symb.	Unit	Symb.
Length, distance	d	metre	m	Force	F	newton	N
Mass	m	gram, kilogram	g, kg	Weight	P	newton	N
Volume	V	litre, cubic metre	L, m³	Voltage	U	volt	V
Time, duration	t	second	s	Electric current	I	ampere	A
Temperature	T	degree Celsius	°C	Resistance	R	ohm	Ω
Density	ρ	gram per litre	g/L	Electric power	P	watt	W
Speed	v	metre per second	m/s	Energy	E	joule, kilowatt-hour	J, kWh
Mass concentration	C	gram per litre	g/L				



The symbol P is used twice: weight (in newtons) and power (in watts), the context tells you which. Duration is written t but some textbooks or at higher level we write Δt.



Check before handing in

- ✓ I have written the symbol, the value and the unit
- ✓ I have not confused the quantity with its unit

- ✓ I have used the right unit
- ✓ I have used the correct case: kg, not Kg

