CAMBRIDGE
International Education

Cambridge IGCSE™

CO-ORDINATED SCIENCES **0654/11**

Paper 1 Multiple Choice (Core) **May/June 2026**

45 minutes

You must answer on the multiple choice answer sheet.

You will need: Multiple choice answer sheet
Soft clean eraser
Soft pencil (type B or HB is recommended)

INSTRUCTIONS

- There are **forty** questions on this paper. Answer **all** questions.
- For each question there are four possible answers **A**, **B**, **C** and **D**. Choose the **one** you consider correct and record your choice in soft pencil on the multiple choice answer sheet.
- Follow the instructions on the multiple choice answer sheet.
- Write in soft pencil.
- Write your name, centre number and candidate number on the multiple choice answer sheet in the spaces provided unless this has been done for you.
- Do **not** use correction fluid or tape.
- Do **not** write on any bar codes.
- You may use a calculator.
- Take the weight of 1.0 kg to be 9.8 N (acceleration of free fall = 9.8 m / s^2).

INFORMATION

- The total mark for this paper is 40.
- Each correct answer will score one mark.
- Any rough working should be done on this question paper.
- The Periodic Table is printed in the question paper.

This document has **16** pages. Any blank pages are indicated.

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1 Which process do all living organisms carry out?

A photosynthesis

B ingestion

C excretion

D asexual reproduction

2 What is **not** made up of cells?

A the liver of an animal

B the wall of an artery

C the phloem of a plant

D the stomata of a leaf

3 A deficiency of which nutrient causes a person to suffer from scurvy?

A calcium

B iron

C vitamin C

D vitamin D

4 What is a pathogen?

A an organism that causes disease

B an organism that makes its own nutrients through photosynthesis

C an organism that gets its energy by eating plants

D an organism that gets its energy from dead organic material in the soil

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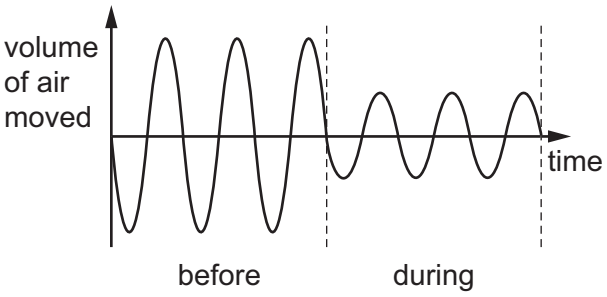
5 Which diagram shows the rate and depth of breathing of a person before and during exercise?

A



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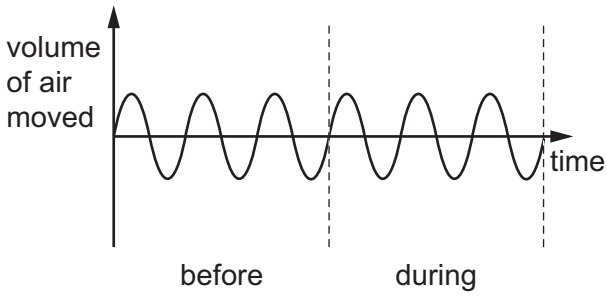

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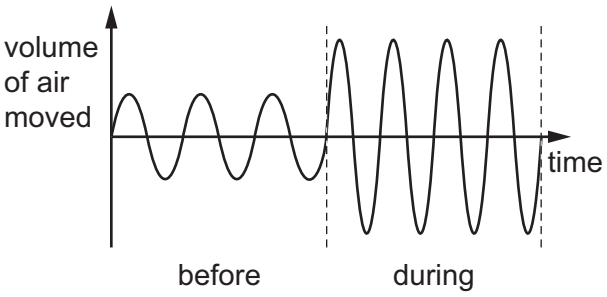
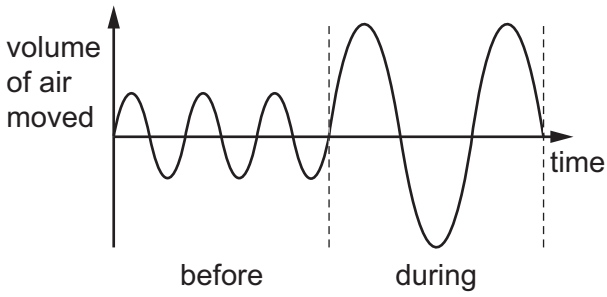


D



6 The word equation for aerobic respiration is shown.

oxygen + ... → carbon dioxide + water

Which molecule is missing from the equation?

A glucose

B glycogen

C starch

D sucrose

7 Which row shows the effect of adrenaline on the body?

	heart rate	pupil diameter
A	decreases	large
B	decreases	small
C	increases	small
D	increases	large

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8 Which statements about antibiotics are correct?

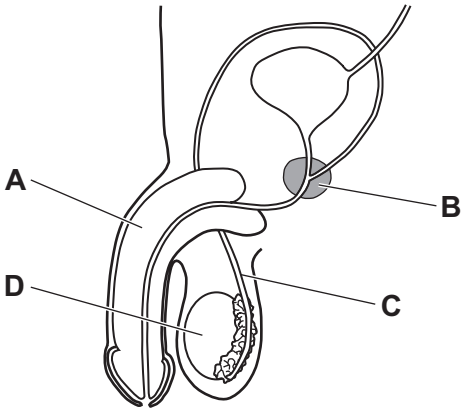
1 Bacterial infections are treated using antibiotics.

2 Some organisms are resistant to antibiotics.

3 Viral infections are treated using antibiotics.

A 1 and 2 **B** 1 and 3 **C** 1 only **D** 2 and 3

9 Which structure secretes fluids in which the sperm swim in the human male reproductive system?



10 Which statement about human gametes is correct?

A There is an X chromosome in all egg cells.

B There is a Y chromosome in all egg cells.

C There is an X chromosome in all sperm cells.

D There is a Y chromosome in all sperm cells.

11 Which process is correctly described?

	process	human intervention	example
A	artificial selection	no	giraffe with long necks
B	artificial selection	yes	cows that produce an increased yield of milk
C	natural selection	no	wheat plants that produce a reduced yield
D	natural selection	yes	cheetahs that can run fast

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12 The diagram shows a food chain.

grass → grasshopper → frog → snake → eagle

The grass receives 14 000 J of energy.

There is a 10% transfer of energy between each organism in the food chain.

Which statement is correct?

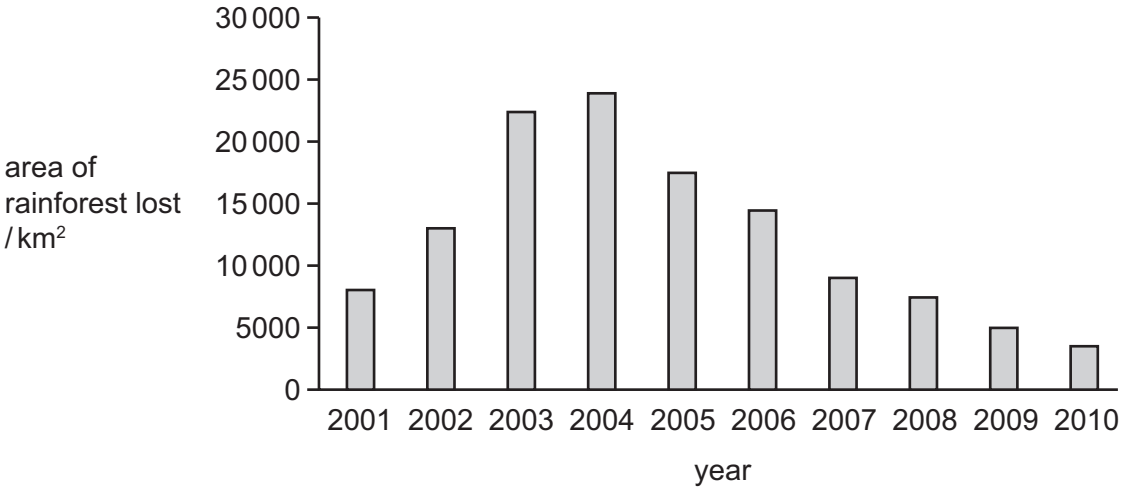
A The eagle receives 14 J of energy.

B The frog receives 1400 J of energy.

C The grasshopper receives 140 J of energy.

D The snake receives 14 J of energy.

13 The graph shows the area of Brazilian rainforest lost each year between 2001 and 2010.



Which statements are correct?

1 The year that had the highest rate of rainforest loss was 2004.

2 The area of forest lost every year after 2004 decreased each year.

3 There was a higher rate of rainforest loss in 2009 than in 2001.

A 1, 2 and 3 **B** 1 and 2 only **C** 1 and 3 only **D** 2 and 3 only

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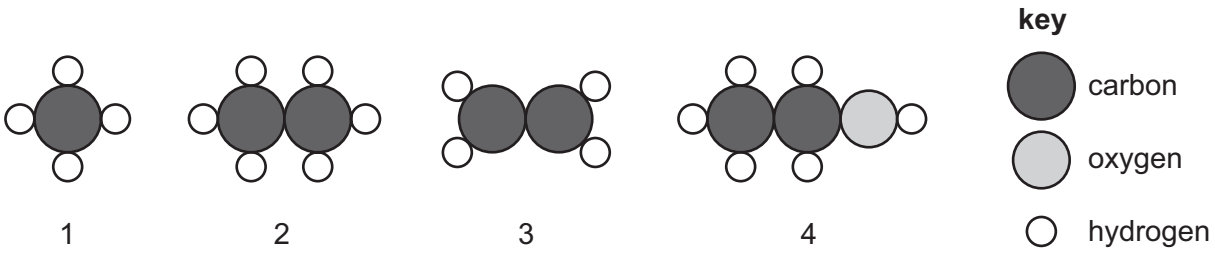
14 The structures of four organic molecules are shown.



Which row identifies the names of these molecules?

	1	2	3	4
A	ethane	ethanol	methane	ethene
B	ethanol	ethene	ethane	methane
C	ethene	methane	ethanol	ethane
D	methane	ethane	ethene	ethanol

15 Green copper(II) carbonate is heated. A black powder is formed and a gas is produced which turns limewater cloudy.

Which word equation is correct?

A copper(II) carbonate → copper + carbon + oxygen

B copper(II) carbonate → copper(II) oxide + carbon monoxide

C copper(II) carbonate → copper(II) oxide + carbon dioxide

D copper(II) carbonate → copper + carbon dioxide

16 Dilute sulfuric acid, H_2SO_4, is electrolysed using platinum electrodes.

What is formed at the electrodes during this process?

A hydrogen only

B hydrogen and sulfur dioxide

C oxygen and sulfur dioxide

D hydrogen and oxygen

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17 Magnesium is added to aqueous copper(II) sulfate.

The temperature of the reaction mixture increases.

Which type of reaction occurs?

A decomposition

B endothermic

C exothermic

D neutralisation

18 Which actions increase the rate of a reaction?

1 Add a catalyst.

2 Increase the concentration of a reactant.

3 Increase the size of solid particles.

4 Decrease the temperature of the reaction.

A 1 and 2 **B** 1 and 3 **C** 2 and 4 **D** 3 and 4

19 Which statements about redox reactions are correct?

1 A reaction where oxygen is transferred from one substance to another is a redox reaction.

2 The end-point of a redox reaction is when the pH equals 7.

3 Metals are always reduced and non-metals are always oxidised in a redox reaction.

A 1 and 2 **B** 1 only **C** 2 and 3 **D** 3 only

20 A beaker contains dilute hydrochloric acid and universal indicator.

When substance X is added to the beaker, the indicator changes colour from red to blue.

What is X?

A calcium oxide

B carbon dioxide

C sulfur dioxide

D water

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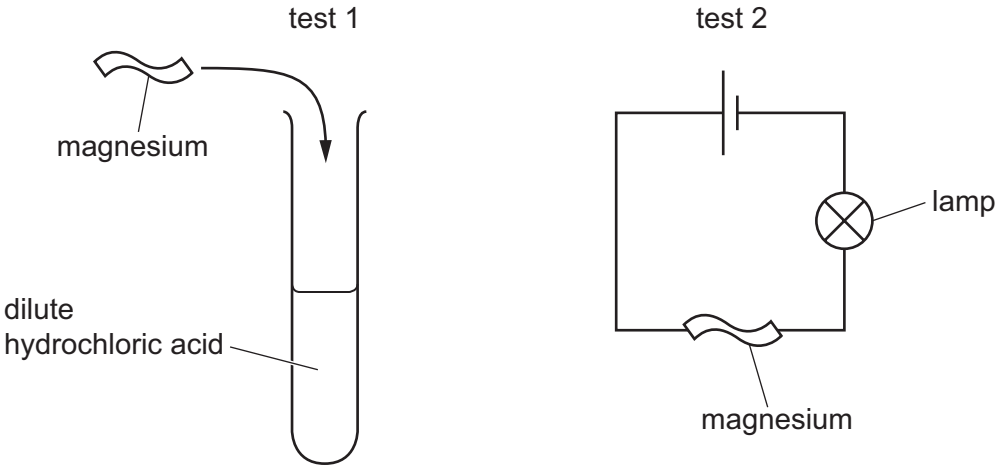
21 An element has a high melting point and forms coloured compounds.

Which row is correct?

	element	density
A	transition metal	high
B	transition metal	low
C	Group I metal	high
D	Group I metal	low

22 Magnesium is tested as shown.



Which row shows the results of the tests?

	test 1	test 2
A	bubbles	lamp does **not** light
B	bubbles	lamp lights
C	no bubbles	lamp does **not** light
D	no bubbles	lamp lights

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23 Water is added separately to anhydrous cobalt(II) chloride and to anhydrous copper(II) sulfate.

Which row describes the colour changes?

	with anhydrous cobalt(II) chloride	with anhydrous copper(II) sulfate
A	blue to pink	white to blue
B	blue to pink	blue to white
C	pink to blue	white to blue
D	pink to blue	blue to white

24 What is the correct sequence for the stages in the treatment of the domestic water supply?

A addition of carbon → filtration → chlorination → sedimentation

B chlorination → addition of carbon → filtration → sedimentation

C filtration → sedimentation → addition of carbon → chlorination

D sedimentation → filtration → addition of carbon → chlorination

25 Which process leads to the formation of acid rain?

A incomplete combustion of methane

B reaction of nitrogen and oxygen in a car engine

C decay of vegetation

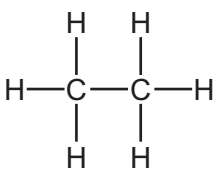
D digestion in animals

26 Some information about a compound is listed.

- It burns in air to form carbon dioxide and water.
- It decolourises aqueous bromine.
- It forms a polymer.

What is the displayed formula of the compound?

A



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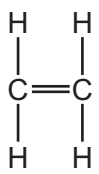
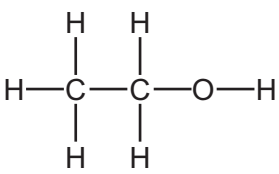


C



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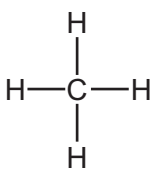


27 Which method is used to separate a mixture of liquids?

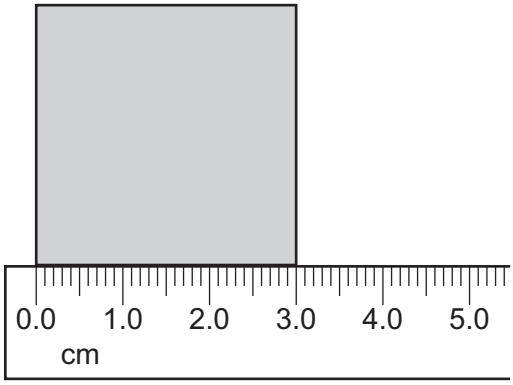
A chromatography

B crystallisation

C fractional distillation

D filtration

28 The diagram shows a cube placed on a ruler.



What is the volume of the cube?

A $9.0\,cm^2$ **B** $9.0\,cm^3$ **C** $27\,cm^2$ **D** $27\,cm^3$

29 A car travels at an average speed of 45 km / h on a journey.

Which other information is needed to calculate the time the journey takes?

A acceleration of the car only

B acceleration of the car and distance travelled by the car

C distance travelled by the car only

D speed of the car at the end of the journey

30 A concrete block exerts a pressure on the ground.

Which expression is used to calculate the pressure due to the block?

A mass of block × area of contact with the ground

B $\frac{\text{mass of block}}{\text{area of contact with the ground}}$

C weight of block × area of contact with the ground

D $\frac{\text{weight of block}}{\text{area of contact with the ground}}$

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31 Which states of matter are easily compressed?

A gases and liquids

B gases only

C liquids and solids

D solids only

32 A student uses an electric hairdryer to dry wet hair.

The hairdryer blows hot air onto the wet hair.

Which process dries the hair?

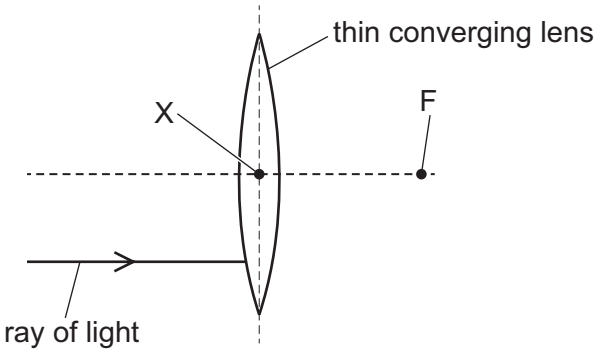
A boiling

B condensation

C evaporation

D solidification

33 The diagram shows a ray of light striking a thin converging lens. The centre of the lens is marked X and the principal focus of the lens is marked F.



What happens to the ray after it passes through the lens?

A It continues in its original direction.

B It travels away from the principal focus F.

C It travels through the centre of the lens X.

D It travels towards the principal focus F.

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34 Visible light contains wavelengths between approximately 400 nm and 700 nm.

Which row gives the colour of each wavelength of visible light?

	400 nm	500 nm	600 nm
A	green	orange	violet
B	green	violet	orange
C	violet	green	orange
D	violet	orange	green

35 Which list shows regions of the electromagnetic spectrum in order of increasing frequency (lowest frequency first)?

A microwaves → radio waves → ultraviolet waves

B microwaves → ultraviolet waves → radio waves

C radio waves → microwaves → ultraviolet waves

D ultraviolet waves → radio waves → microwaves

36 A plastic rod is rubbed with a cloth. The plastic rod becomes negatively charged.

Which statement explains why this happens?

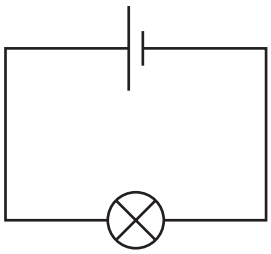
A Electrons move from the cloth to the rod.

B Electrons move from the rod to the cloth.

C Protons move from the cloth to the rod.

D Protons move from the rod to the cloth.

37 The diagram shows an electric circuit that contains a cell and a lamp.



Which statement is correct?

A The electric circuit transfers charge from the cell to the lamp only.

B The electric circuit transfers charge from the cell to the lamp and then into the surroundings.

C The electric circuit transfers energy from the cell to the lamp only.

D The electric circuit transfers energy from the cell to the lamp and then into the surroundings.

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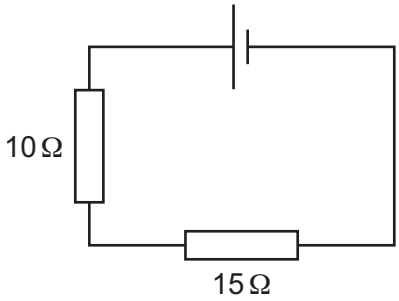
38 A student connects a circuit as shown.



What is the total resistance of the circuit?

A 5.0 Ω **B** 10 Ω **C** 15 Ω **D** 25 Ω

39 A radiation detector is in a box made from aluminium that is 3 cm thick.

The box is on top of a radioactive rock.

Which radiation from the rock is the detector able to detect?

A α-particles only

B β-particles only

C γ-rays only

D α-particles and γ-rays

40 What is the approximate diameter of the Milky Way galaxy?

A 10^5 km

B 10^8 km

C 10^5 light-years

D 10^8 light-years

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The Periodic Table of Elements

Group																	
I	II											III	IV	V	VI	VII	VIII
							1 H hydrogen 1										2 He helium 4
3 Li lithium 7	4 Be beryllium 9											5 B boron 11	6 C carbon 12	7 N nitrogen 14	8 O oxygen 16	9 F fluorine 19	10 Ne neon 20
11 Na sodium 23	12 Mg magnesium 24											13 Al aluminium 27	14 Si silicon 28	15 P phosphorus 31	16 S sulfur 32	17 Cl chlorine 35.5	18 Ar argon 40
19 K potassium 39	20 Ca calcium 40	21 Sc scandium 45	22 Ti titanium 48	23 V vanadium 51	24 Cr chromium 52	25 Mn manganese 55	26 Fe iron 56	27 Co cobalt 59	28 Ni nickel 59	29 Cu copper 64	30 Zn zinc 65	31 Ga gallium 70	32 Ge germanium 73	33 As arsenic 75	34 Se selenium 79	35 Br bromine 80	36 Kr krypton 84
37 Rb rubidium 85	38 Sr strontium 88	39 Y yttrium 89	40 Zr zirconium 91	41 Nb niobium 93	42 Mo molybdenum 96	43 Tc technetium –	44 Ru ruthenium 101	45 Rh rhodium 103	46 Pd palladium 106	47 Ag silver 108	48 Cd cadmium 112	49 In indium 115	50 Sn tin 119	51 Sb antimony 122	52 Te tellurium 128	53 I iodine 127	54 Xe xenon 131
55 Cs caesium 133	56 Ba barium 137	57–71 lanthanoids	72 Hf hafnium 178	73 Ta tantalum 181	74 W tungsten 184	75 Re rhenium 186	76 Os osmium 190	77 Ir iridium 192	78 Pt platinum 195	79 Au gold 197	80 Hg mercury 201	81 Tl thallium 204	82 Pb lead 207	83 Bi bismuth 209	84 Po polonium –	85 At astatine –	86 Rn radon –
87 Fr francium –	88 Ra radium –	89–103 actinoids	104 Rf rutherfordium –	105 Db dubnium –	106 Sg seaborgium –	107 Bh bohrium –	108 Hs hassium –	109 Mt meitnerium –	110 Ds darmstadtium –	111 Rg roentgenium –	112 Cn copernicium –	113 Nh nihonium –	114 Fl flerovium –	115 Mc moscovium –	116 Lv livermorium –	117 Ts tennessine –	118 Og oganesson –

Key

atomic number
atomic symbol
name
relative atomic mass

lanthanoids	57 La lanthanum 139	58 Ce cerium 140	59 Pr praseodymium 141	60 Nd neodymium 144	61 Pm promethium –	62 Sm samarium 150	63 Eu europium 152	64 Gd gadolinium 157	65 Tb terbium 159	66 Dy dysprosium 163	67 Ho holmium 165	68 Er erbium 167	69 Tm thulium 169	70 Yb ytterbium 173	71 Lu lutetium 175
actinoids	89 Ac actinium –	90 Th thorium 232	91 Pa protactinium 231	92 U uranium 238	93 Np neptunium –	94 Pu plutonium –	95 Am americium –	96 Cm curium –	97 Bk berkelium –	98 Cf californium –	99 Es einsteinium –	100 Fm fermium –	101 Md mendelevium –	102 No nobelium –	103 Lr lawrencium –

The volume of one mole of any gas is 24 dm^3 at room temperature and pressure (r.t.p.).