

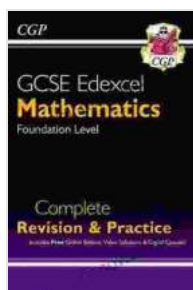
GCSE Maths Edexcel Complete Revision Practice: Elevate Your Exam Performance

Empower Yourself for GCSE Maths Edexcel Success

As you embark on your GCSE Maths Edexcel journey, equip yourself with the ultimate companion—our comprehensive Complete Revision Practice guide. This indispensable resource is meticulously crafted to empower you with everything you need to not just pass, but excel in your exam.

Unleash the Power of Exam-Style Questions

Practice makes perfect, and what better way to hone your skills than with authentic questions modeled after the actual GCSE Maths Edexcel exam? Our practice guide is brimming with an extensive collection of exam-style questions that cover every topic you'll encounter on test day. From algebra and geometry to statistics and probability, no stone is left unturned.



GCSE Maths Edexcel Complete Revision & Practice: Foundation inc Videos & Quizzes (CGP GCSE Maths 9-1 Revision) by CGP Books

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Language : English
File size : 17236 KB
Print length : 248 pages
Screen Reader : Supported
X-Ray for textbooks : Enabled

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Answers to exam-style questions

Topic 2

1. B
2. B
3. D
4. C
5. C
6. B
7. C
8. C
9. C
10. A

11. a. *Close nuclei, the number of protons in the nucleus of an atom, range in difference only by the same amount with different mass numbers, as different numbers of neutrons in the nucleus.* (1)
b. *The number of protons is given by the atomic number. The number of electrons in the most common isotope of an element is the same as the atomic number, i.e. $37 = 36 + 1$.* (1)
c. *It is an atom as the number of electrons equals the number of protons.* (1)
d. *Most spectroscopies* (1)
Wavelength multiplied by 10^{-10}
 $(6.63 \times 10^{-34} \times 7.91 \times 10^8) \div (6.63 \times 10^{-34} \times 5.7 \times 10^{14})$ (1)

12. a. *Continuous spectrum: all frequencies/wavelengths of light present. Discrete spectrum: only certain frequencies/wavelengths of light present.* (2)



- That is promoted to a higher energy level, the electron is unstable at this higher level and falls to a lower energy level. As it falls from a higher energy level to a lower one, the energy difference is given out in the form of a photon of light. This gives a line in the spectrum.* (3)

d. E = hf

Energy of photon emitted when electron falls from level 6 to level 5 is
 $6.63 \times 10^{-34} \times 4.83 \times 10^{14}$
 $= 3.20 \times 10^{-19} \text{ J}$

Energy of photon emitted when electron falls from level 6 to level 3 is
 $6.63 \times 10^{-34} \times 2.74 \times 10^{15}$
 $= 1.82 \times 10^{-18} \text{ J}$

In both cases the electron falls to the same lower level, so the difference in energy between these is the energy difference between level 6 and level 5. Therefore the energy difference between these levels is $1.82 \times 10^{-18} - 3.20 \times 10^{-19}$ or $2.20 \times 10^{-18} \text{ J}$. If more significant figures are carried through in the energy is calculated by subtracting the two figures from each other the answer $2.65 \times 10^{-18} \text{ J}$ is obtained.

13. a. $1.7 \times 10^{-22} \text{ kg m}^2 \text{ s}^{-2}$ (1)

b. $\text{K}^{2+}(\text{g}) \rightarrow \text{K}^{2+}(\text{aq}) + e^{-}$ (1) *any reasonable anion* (1)

c. *There are smaller energy levels here. The most important one is that when the first electron is removed, it is removed from the fourth shell (outer energy level), and the second electron is removed from the third shell, so electrons in the third shell is closer to the nucleus and therefore more strongly held.*

When a third ion is also formed, the first electron is removed from a second shell, but the second is removed from a positive ion — it is more difficult to remove a negatively charged electron from a positive ion than from a neutral atom, since the first electron has been ionised, there is less electron-electron repulsion > all electrons are pulled in more closely and the ions smaller so all electrons are held more tightly. (1)

d. *The first ionisation of Ca is higher, as the energy the electron is removed from the shell (outer energy level) and the shell is closer to the nucleus of calcium than it is for strontium. Ca has a higher nuclear charge than Sr, so the outer electrons are attracted more strongly to the nucleus & calcium atom is also smaller than a strontium atom and so the outer electron is held closer to the nucleus and therefore more strongly attracted.* (3)

Illuminating Solutions at Your Fingertips

Solving math problems can be daunting, but we've got you covered. Each exam-style question in our practice guide is meticulously paired with a detailed solution. These solutions are not just mechanical answers; they provide step-by-step explanations, breaking down each question into manageable chunks and revealing the underlying concepts. With our expert

guidance, you'll not only find the correct answers but also gain a deep understanding of the material.

Sharpen Your Skills with Expert Support

Our Complete Revision Practice guide is more than just a collection of questions and solutions. It's your personal tutor, providing invaluable support throughout your revision journey. Each topic is introduced with clear explanations, ensuring you have a solid foundation to tackle even the most challenging questions. Concise summaries and key points at the end of each section serve as quick revision aids, helping you lock in the knowledge you've acquired.

How to write a SUMMARY

STEP 1 READ & UNDERSTAND	STEP 2 Pick the key words	STEP 3 WRITE THE SUMMARY IN YOUR OWN WORDS
<p>Water Pollution</p> <p>In order to have good health and a comfortable life, we need safe drinking water. However, in many parts of the world, there is a serious problem of water pollution. This is caused by the fact that many people are throwing away their rubbish in the streets and rivers. This causes the water to become dirty and unsafe to drink. In some countries, people are also throwing away their rubbish in the rivers and streams. This causes the water to become dirty and unsafe to drink. In some countries, people are also throwing away their rubbish in the rivers and streams. This causes the water to become dirty and unsafe to drink.</p> <p>Water pollution is a major problem in many parts of the world. It is caused by the fact that many people are throwing away their rubbish in the streets and rivers. This causes the water to become dirty and unsafe to drink. In some countries, people are also throwing away their rubbish in the rivers and streams. This causes the water to become dirty and unsafe to drink.</p> <p>Water pollution is a major problem in many parts of the world. For example, in the USA, people throw their rubbish away in a water pit called "landfills". It has been found that if the rubbish is not buried and covered, the water becomes polluted and unsafe to drink. Also, if people use their cars to travel to work, this causes the water to become dirty and unsafe to drink. Some people try to solve this problem by using cars that do not pollute the air. In this way, the pollution can be reduced. However, this is not a long-term solution. People need to stop using their cars and start using public transport.</p>	<p>Water</p> <p>Drinking water</p> <p>Water pollution</p> <p>Rubbish</p> <p>Streets</p> <p>Rivers</p> <p>Streams</p> <p>Unsafe</p> <p>Public transport</p> <p>Landfills</p> <p>Car pollution</p> <p>Public transport</p>	<p>For good health and a good life, we need safe drinking water. However, in many parts of the world, there is a serious problem of water pollution. This is caused by the fact that many people are throwing away their rubbish in the streets and rivers. This causes the water to become dirty and unsafe to drink. In some countries, people are also throwing away their rubbish in the rivers and streams. This causes the water to become dirty and unsafe to drink.</p> <p>Water pollution is a major problem in many parts of the world. For example, in the USA, people throw their rubbish away in a water pit called "landfills". It has been found that if the rubbish is not buried and covered, the water becomes polluted and unsafe to drink. Also, if people use their cars to travel to work, this causes the water to become dirty and unsafe to drink. Some people try to solve this problem by using cars that do not pollute the air. In this way, the pollution can be reduced. However, this is not a long-term solution. People need to stop using their cars and start using public transport.</p>

Reinforce your understanding with concise summaries and key points.

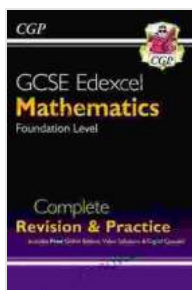
Conquer Exam Day with Confidence

With regular practice using our Complete Revision Practice guide, you'll develop a strong grasp of the fundamental concepts and techniques tested in the GCSE Maths Edexcel exam. This newfound confidence will translate into a positive mindset on exam day, allowing you to calmly and confidently tackle any question that comes your way. Our practice guide is your key to unlocking your full potential and achieving the exam results you deserve.

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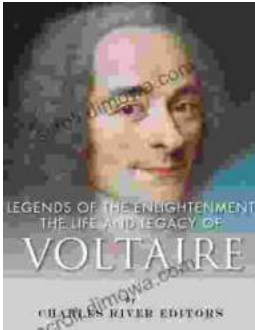


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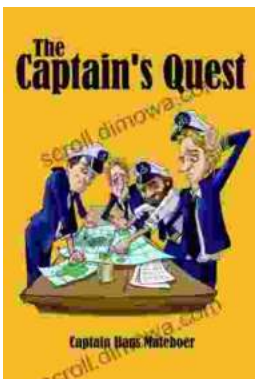
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