CXC CSEC Mathematics Maths Practice Test (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

• Practice answering questions under realistic conditions,
• Improve accuracy and speed,
• Review explanations to strengthen weak areas, and
• Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

1. **What is the formula for finding the volume of a cylinder?**
    A. V = πr²h
    B. V = 2πrh
    C. V = πr²
    D. V = lwh

2. **If 540 beads are shared in the ratio 4:5, what is the larger share of beads?**
    A. 240
    B. 300
    C. 220
    D. 450

3. **What is the simplified form of √50?**
    A. 5√1
    B. 5√2
    C. 10√2
    D. 25√2

4. **Convert 0.875 to a fraction.**
    A. 3/4
    B. 7/8
    C. 5/8
    D. 1/2

5. **If you roll a die, what is the probability of rolling an even number?**
    A. 1/3
    B. 1/2
    C. 1/4
    D. 1/6

6. **What is the value of sin(30°)?**
    A. 0
    B. 0.25
    C. 0.5
    D. 1

7. **If Ann and Betty shared a sum of money in the ratio 2:3 and Ann received $120, what was Betty's share?**

    A. $180

    B. $150

    C. $200

    D. $160

8. **How many hours are there in 10,800 seconds?**

    A. 1

    B. 2

    C. 3

    D. 4

9. **What is the volume of a cube with an edge length of 6 cm?**

    A. 36 cm³

    B. 72 cm³

    C. 216 cm³

    D. 144 cm³

10. **What is the distance between the points (1, 2) and (4, 6)?**

    A. 4

    B. 5

    C. 6

    D. 7

Answers

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

Explanations

1. What is the formula for finding the volume of a cylinder?

A. V = πr²h

B. V = 2πrh

C. V = πr²

D. V = lwh

The formula for finding the volume of a cylinder is given by V = πr²h. In this formula, "V" represents the volume, "r" is the radius of the circular base of the cylinder, and "h" is the height of the cylinder. The reason this formula is derived in this manner is that the volume of any three-dimensional shape can often be calculated by determining the area of its base and then multiplying that area by its height. For a cylinder, the base is a circle. The area of a circle is calculated using the formula A = πr². Once we have the area of the base, we then extend that area vertically by the height "h" of the cylinder. Therefore, the complete formula becomes Volume = Area of the base × Height = πr² × h. This understanding is critical when visualizing how the volume is determined. It incorporates both the characteristics of the circular base and the height, effectively combining them to illustrate the amount of space the cylinder occupies.

2. If 540 beads are shared in the ratio 4:5, what is the larger share of beads?

A. 240

B. 300

C. 220

D. 450

To find the larger share of beads when 540 beads are shared in the ratio of 4:5, we first need to understand how to break down the total amount using the given ratio. The ratio 4:5 indicates that for every 4 parts of beads, there are 5 parts of beads. To find the total number of parts combined in this ratio, we add the two parts together: 4 + 5 = 9 parts in total. Next, we will determine the value of one part by dividing the total number of beads by the total number of parts: 540 beads ÷ 9 parts = 60 beads per part. Now, to determine the larger share, which corresponds to the 5 parts of the ratio, we multiply the value of one part by 5: 60 beads/part × 5 parts = 300 beads. Thus, the larger share of beads, according to the given ratio, is 300. This matches the provided answer, confirming its correctness in the context of the calculation and the understanding of ratios.

3. What is the simplified form of √50?

    A. 5√1

    B. 5√2

    C. 10√2

    D. 25√2

To simplify the square root of 50, we start by factoring 50 into its prime factors. The number 50 can be expressed as 25 times 2, since $25 \times 2 = 50$. Next, we know that the square root of a product can be separated into the product of the square roots of the factors: $$\sqrt{50} = \sqrt{25 \times 2} = \sqrt{25} \times \sqrt{2}$$ Here, the square root of 25 is 5, as 5 times 5 equals 25. Therefore, we can substitute this back into our equation: $$\sqrt{50} = 5 \times \sqrt{2}$$ This gives us the simplified form of $\sqrt{50}$ as $5\sqrt{2}$. Understanding how to factor numbers and apply the property of square roots is essential in reaching the correct answer. This process highlights the importance of recognizing perfect squares and how they can simplify square root calculations, enabling students to work through similar problems effectively in the future.

4. Convert 0.875 to a fraction.

    A. 3/4

    B. 7/8

    C. 5/8

    D. 1/2

To convert the decimal 0.875 to a fraction, we start by recognizing that the decimal has three decimal places. This means it can be expressed as: $$0.875 = \frac{875}{1000}$$ Next, we simplify the fraction by finding the greatest common divisor (GCD) of 875 and 1000. The prime factorization of 875 is 7×5^3 and for 1000, it is $10^3 = 2^3 \times 5^3$. The GCD here is 125 (which equals 5^3). Now, divide both the numerator and the denominator by their GCD: $$\frac{875 \div 125}{1000 \div 125} = \frac{7}{8}$$ Thus, 0.875 can be expressed as the fraction $\frac{7}{8}$ in its simplest form. This fraction represents the decimal value accurately, demonstrating the relationship between fractions and their decimal counterparts.

5. If you roll a die, what is the probability of rolling an even number?

A. 1/3

B. 1/2

C. 1/4

D. 1/6

To determine the probability of rolling an even number on a standard six-sided die, we first identify the total number of outcomes when rolling the die. A standard die has six faces, numbered 1 through 6.   Now, we specify what constitutes an even number in this context. The even numbers on the die are 2, 4, and 6. There are three favorable outcomes (2, 4, and 6) that meet the criteria of being even. The probability is calculated using the formula: Probability = (Number of favorable outcomes) / (Total number of possible outcomes). In this case, the number of favorable outcomes is 3 (the even numbers), and the total number of possible outcomes is 6 (all the faces of the die).   Thus, we have: Probability = 3 / 6. This simplifies to 1 / 2.   Therefore, the correct answer is indeed a probability of rolling an even number, which is represented as 1/2. This reflects the concept that half of the outcomes from rolling the die result in an even number.

6. What is the value of sin(30°)?

A. 0

B. 0.25

C. 0.5

D. 1

The value of sin(30°) is 0.5. This can be understood through the properties of the sine function and the special angles in trigonometry. The sine of an angle in a right triangle is defined as the ratio of the length of the opposite side to the length of the hypotenuse. For a 30° angle in a right triangle, if you consider an equilateral triangle where each side measures 1 unit, splitting it in half creates two 30°-60°-90° triangles. In this particular configuration, the side opposite the 30° angle is half the length of the hypotenuse. Since the hypotenuse is 1 unit, the length of the side opposite the 30° angle is 0.5 units. Therefore, when you compute the sine of 30°: \[\sin(30°) = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{0.5}{1} = 0.5 \] This fundamental value of sin(30°) is often memorized in trigonometry because it is one of the key angles commonly encountered. Understanding this helps with solving other problems in

7. If Ann and Betty shared a sum of money in the ratio 2:3 and Ann received $120, what was Betty's share?

A. $180

B. $150

C. $200

D. $160

To determine Betty's share in the money that Ann and Betty shared, we first analyze the ratio in which the money was divided. The ratio of Ann's share to Betty's share is 2:3. This means that for every 2 parts that Ann receives, Betty receives 3 parts. Given that Ann received $120, we can calculate the amount that corresponds to one part of the ratio. Since Ann receives 2 parts, we can find the value of one part by dividing her share by 2: $$ \text{Value of one part} = \frac{\text{Ann's share}}{2} = \frac{120}{2} = 60 $$ Now, to find Betty's share, which corresponds to 3 parts of the total, we multiply the value of one part by 3: $$ \text{Betty's share} = 3 \times \text{Value of one part} = 3 \times 60 = 180 $$ Thus, Betty's share of the money is $180. This calculation clearly illustrates how the parts of the ratio translate into actual dollar amounts based on Ann's known share.

8. How many hours are there in 10,800 seconds?

A. 1

B. 2

C. 3

D. 4

To determine how many hours are in 10,800 seconds, we start by converting seconds into hours. We know that there are 60 seconds in a minute and 60 minutes in an hour. Therefore, there are: 60 seconds/minute × 60 minutes/hour = 3600 seconds/hour. To find the number of hours in 10,800 seconds, we divide the total seconds by the number of seconds in one hour: 10,800 seconds ÷ 3600 seconds/hour = 3 hours. This calculation shows that 10,800 seconds is equivalent to 3 hours. Consequently, the correct answer reflects the accurate conversion from seconds to hours, leading us to conclude that there are indeed 3 hours in 10,800 seconds.

9. What is the volume of a cube with an edge length of 6 cm?

A. 36 cm³

B. 72 cm³

C. 216 cm³

D. 144 cm³

To find the volume of a cube, you use the formula: $$ \text{Volume} = \text{side length}^3 $$ In this case, the edge length of the cube is given as 6 cm. Substituting this value into the formula gives: $$ \text{Volume} = 6 \, \text{cm} \times 6 \, \text{cm} \times 6 \, \text{cm} = 6^3 $$ Calculating (6^3) gives: $$ 6^3 = 6 \times 6 \times 6 = 36 \times 6 = 216 \, \text{cm}^3 $$ Thus, the volume of the cube is 216 cm³. This calculation confirms that the choice indicating 216 cm³ is correct, as it accurately reflects the volume derived from raising the edge length to the power of three. The other options do not correspond to the correct calculation steps or results for the volume of a cube with an edge length of 6 cm.

10. What is the distance between the points (1, 2) and (4, 6)?

    A. 4

    B. 5

    C. 6

    D. 7

To find the distance between the points (1, 2) and (4, 6), you can use the distance formula, which is given by: $$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$ Here, (x_1, y_1) is the first point (1, 2) and (x_2, y_2) is the second point (4, 6). Plugging in these coordinates into the formula: 1. Calculate $(x_2 - x_1)$: $$4 - 1 = 3$$ 2. Calculate $(y_2 - y_1)$: $$6 - 2 = 4$$ 3. Now substitute these values into the distance formula: $$d = \sqrt{(3)^2 + (4)^2}$$ $$d = \sqrt{9 + 16}$$ $$d = \sqrt{25}$$ $$d = 5$$ Thus, the distance between the points (1, 2) and (

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://cxccsecmath.examzify.com

We wish you the very best on your exam journey. You've got this!