COLLEGE MATH CLEP PREP PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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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!

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Questions

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1. What is the solution of the linear equation y = 2x + 4?

A. x + 4 = y/2

B. 4 = y – 2x

C. y = 2x + 4

D. x = (y - 4)/2

2. What is the slope of the line through the points (-4,2) and (2,7)?

A. -3/2

B. -1/2

C. 1/2

D. 3/2

3. What is the inverse of the relation {(2,3), (4,5)}?

A. {(2, 5), (3,4)}

B. {(3, 2), (5,4)}

C. {(2, 5), (4,3)}

D. {(3, 2), (4,5)}

4. What is the formula to calculate the perimeter of a rectangle?

A. l + b +h

B. 2l + 2b

C. 4l + 4b

D. P= 2l + h

5. If the discriminant of a quadratic equation is 24, what type of solutions will the equation have?

A. Imaginary

B. Complex

C. Real and Distinct

D. Real and Equal

6. Which of the following contains only rational numbers?

A. 0, 1, √3, pi

B. 0, 1, 1/2, √2

C. 1, 2, 3, 4

D. 1/2, 2/4, 3/4, 5/2

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7. What is a logarithm?

A. A power of a number

B. A numerical exponent

C. A mathematical relationship between two numbers

D. An exponential equation

8. What is the combination of nCr when n=7 and r=4?

A. 12

B. 21

C. 35

D. 42

9. What is the measure of the third angle of a triangle if two angles measure 75 degrees and 35 degrees, respectively?

A. 37 degrees

B. 40 degrees

C. 75 degrees

D. 120 degrees

10. What is a prime number?

A. A number that can only be divided by 1 and itself

B. A number that can be divided by itself

C. A number that can only be divided by 1

D. A number that can be divided by any number

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Answers

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

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Explanations

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1. What is the solution of the linear equation y = 2x + 4?

A. x + 4 = y/2

B. 4 = y – 2x

C. y = 2x + 4

D. x = (y - 4)/2

The given linear equation is already in slope-intercept form, y = mx + b, where m is the slope and b is the y-intercept. Therefore, to solve for x, we need to isolate it on one side of the equation. In options A, B, and C, the variable x is not isolated and therefore, those options are incorrect. Option D isolates x by subtracting 4 from both sides and then dividing both sides by 2. This results in x = (y - 4)/2, making it the correct answer.

2. What is the slope of the line through the points (-4,2) and (2,7)?

A. -3/2

B. -1/2

C. 1/2

D. 3/2

The slope of a line is determined by the change in y-coordinates over the change in x-coordinates. In this case, the change in y is 7-2=5 and the change in x is 2-(-4)=6. So, the slope is 5/6 which is equivalent to 1/2. Option A has a negative sign in front of the fraction which is incorrect since the slope of the line is positive. Option B has a negative numerator which is also incorrect. Option D has a larger numerator than denominator which does not follow the correct slope calculation. Therefore, option C is the correct answer.

3. What is the inverse of the relation {(2,3), (4,5)}?

A. {(2, 5), (3,4)}

B. {(3, 2), (5,4)}

C. {(2, 5), (4,3)}

D. {(3, 2), (4,5)}

The inverse of a relation is found by swapping the first and second elements of each ordered pair. In this case, the inverse of {(2,3), (4,5)} would be {(3,2), (5,4)}. Option A is incorrect because it swaps the elements of each pair, but does not change the order of the pairs. Option C is incorrect because it swaps the elements of each pair, but also changes the order of the pairs. Option D is incorrect because it only swaps the first element of each pair, but does not change the order of the pairs.

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4. What is the formula to calculate the perimeter of a rectangle?

A. l + b +h

B. 2l + 2b

C. 4l + 4b

D. P= 2l + h

The formula for calculating the perimeter of a rectangle is adding up all its sides, so option B, 2l + 2b, is the correct answer. Option A, l + b + h, is incorrect because the "h" refers to the height, which is not a side of a rectangle. Option C, 4l + 4b, is incorrect because it would double count each side of the rectangle. Option D, P = 2l + h, is incorrect because it is missing a term for the other side of the rectangle. Remember, the perimeter is the distance around the outside of the rectangle, so all its sides must be accounted for in the formula.

5. If the discriminant of a quadratic equation is 24, what type of solutions will the equation have?

A. Imaginary

B. Complex

C. Real and Distinct

D. Real and Equal

The discriminant of a quadratic equation is the value found under the square root in the quadratic formula. It is used to determine the nature of the solutions to a quadratic equation. In this case, since the discriminant is a positive number (24), the equation will have two distinct real solutions. This means that when graphed, the parabola will intersect the x-axis at two distinct points. Option A is incorrect because having imaginary solutions means that the discriminant will be negative. Option B is also incorrect because complex solutions refer to solutions that involve both real and imaginary numbers. In this case, the solutions will only involve real numbers. Option D is incorrect because having equal solutions means that the discriminant will be equal to 0, but in this case, the discriminant is 24. Therefore, the correct answer is C Real and Distinct.

6. Which of the following contains only rational numbers?

A. 0, 1, √3, pi

B. 0, 1, 1/2, √2

C. 1, 2, 3, 4

D. 1/2, 2/4, 3/4, 5/2

Rational numbers are numbers that can be expressed as a ratio of two integers. Option A is incorrect because √3 and pi are both irrational numbers that cannot be expressed as a ratio. Option B is incorrect because √2 is also irrational. Option C is incorrect because again, all of the numbers listed are whole numbers and not ratios. Option D is the only option that contains numbers that can be expressed as ratios, making it the correct answer.

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7. What is a logarithm?

A. A power of a number

B. A numerical exponent

C. A mathematical relationship between two numbers

D. An exponential equation

A logarithm is a mathematical relationship between two numbers. While options A and B involve powers and exponents, those are only parts of what makes up a logarithm. Option D, an exponential equation, is related to logarithms in that logarithms are often used to solve for unknowns in exponential equations, but it is not a definition of what a logarithm is. The only option that accurately describes what a logarithm is is option C.

8. What is the combination of nCr when n=7 and r=4?

A. 12

B. 21

C. 35

D. 42

Explanation The correct combination of nCr for this question can be found by using the formula nCr = n!/(r!(n-r)!). In this case, n=7 and r=4, so the equation becomes 7!/(4!(7-4)!)=35. Therefore, the correct answer is 35, option C. Option A and B are incorrect because they do not take into account the factorial calculations. Option D is incorrect because it does not take into account the (n-r)! in the denominator. It is important to use the proper formula and values to correctly calculate nCr.

9. What is the measure of the third angle of a triangle if two angles measure 75 degrees and 35 degrees, respectively?

A. 37 degrees

B. 40 degrees

C. 75 degrees

D. 120 degrees

This is because the three angles of a triangle always add up to 180 degrees. In this case, the first two angles add up to 110 degrees, leaving 70 degrees for the third angle. Since the third angle is the missing piece to make the total of 180 degrees, it must equal the remaining amount, which is 70 degrees. Thus, the measure of the third angle is 70 degrees, which is option D. A 37 degrees is incorrect because it does not account for the other two angles in the triangle and does not add up to 180 degrees. B: 40 degrees is incorrect because it also does not account for the other two angles in the triangle and does not add up to 180 degrees. C: 75 degrees is incorrect because it is one of the given angles and the question is asking for the measure of the third

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10. What is a prime number?

A. A number that can only be divided by 1 and itself

B. A number that can be divided by itself

C. A number that can only be divided by 1

D. A number that can be divided by any number

A prime number is a positive integer that can only be divided by 1 and itself, making it unable to be factored further. Option B is incorrect because every number is divisible by itself, and option D is incorrect because not every number can be divided by any number. Option C is also incorrect because every number is divisible by 1.

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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://collegemathematicsclepppractice.examzify.com

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

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