

COLLEGE MATH CLEP PREP PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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

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1. What is the equation of the line that passes through (3,9) and is perpendicular to the line $4x + y = 8$?
- A. $4x + y = 9$
 - B. $y = -4x + 9$
 - C. $y = 4x + 9$
 - D. $y = -4x - 9$
2. What is the square root of 144?
- A. 12
 - B. 24
 - C. 40
 - D. 48
3. What is the result of $(9 + 2x)(6 - 4x)$?
- A. $-12x^2 + 4x + 54$
 - B. $-12x^2 + 4x + 52$
 - C. $12x^2 - 4x + 54$
 - D. $12x^2 - 4x + 52$
4. What is the area of a square with sides of length 5?
- A. 10
 - B. 25
 - C. 50
 - D. 75
5. What is the solution of the system of equations $3x - y = 6$ and $x + 2y = 4$?
- A. (2,2)
 - B. (4,6)
 - C. (-2,-2)
 - D. (-4,-6)
6. Which of these is NOT an equation of a line?
- A. $y = mx$
 - B. $x+y=4$
 - C. $y=3$
 - D. $2x-5y=7$

7. Which of the following is not a solution for the equation $\ln x = -1$?

- A. 0.5
- B. -1
- C. 0
- D. 0.3678

8. 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. $x = (y - 4)/2$

9. What is the slope of the line passing through points (2,-1) and (5,1)?

- A. -3
- B. $-1/2$
- C. 0
- D. $1/2$

10. What is the result of multiplying two irrational numbers?

- A. Prime
- B. Whole
- C. Rational
- D. Irrational

Answers

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

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Explanations

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1. What is the equation of the line that passes through (3,9) and is perpendicular to the line $4x + y = 8$?

A. $4x + y = 9$

B. $y = -4x + 9$

C. $y = 4x + 9$

D. $y = -4x - 9$

A is incorrect because it is the equation of a parallel line, not a perpendicular line. The slope of the given line is -4 and the perpendicular line's slope should be the negative reciprocal, which is $1/4$. Therefore, the correct equation would not have the same slope as the given line. B and C are both incorrect because they have the same slope as the given line, and as stated before, the perpendicular line's slope should be the negative reciprocal. The correct equation is D because the given point (3,9) satisfies the equation when substituted. Additionally, the slope (-4) multiplied by the slope of the perpendicular line $(1/4)$ gives a product of -1 , as it should for two perpendicular lines.

2. What is the square root of 144?

A. 12

B. 24

C. 40

D. 48

The square root of a number is a value that, when multiplied by itself, gives the original number. The square root of 144 is 12 because 12 multiplied by 12 equals 144. Option B, 24, is not the correct square root as it is the multiplied product of 12 and 2, which does not give the original number. Option C, 40, and D, 48, are also not the correct square roots as neither multiplied by themselves equals 144. It is important to remember that when finding the square root of a number, the answer should be a single value and not a product of multiple numbers.

3. What is the result of $(9 + 2x)(6 - 4x)$?

A. $-12x^2 + 4x + 54$

B. $-12x^2 + 4x + 52$

C. $12x^2 - 4x + 54$

D. $12x^2 - 4x + 52$

There are a few ways to solve this problem. One way is to use the FOIL method, which stands for First, Outer, Inner, and Last. This method involves multiplying the terms in the first set of parentheses with the terms in the second set of parentheses. The result of this multiplication is $-12x^2 + 4x + 54$, so options A and B can be eliminated. Another way to solve this problem is by using the distributive property, which involves distributing each term in the first set of parentheses to each term in the second set of parentheses. When using this method, the result is $12x^2 - 4x + 54$, so option C can also be eliminated. This leaves us with option D, which is the correct answer. It can also be obtained by combining like terms in the final result from either method.

4. What is the area of a square with sides of length 5?

- A. 10
- B. 25**
- C. 50
- D. 75

The area of a square is calculated by multiplying the length of one side by itself. In this case, the length of one side is 5, so we would do $5 \times 5 = 25$. This means that the area of the square is 25. The other choices are incorrect because they either do not use the correct calculation method or do not result in the correct area for a square with sides of length 5. For example, option A is only half of the actual area and options C and D are much larger than what a square with sides of length 5 would have. Therefore, B is the correct answer.

5. What is the solution of the system of equations $3x - y = 6$ and $x + 2y = 4$?

- A. (2,2)**
- B. (4,6)
- C. (-2,-2)
- D. (-4,-6)

The solution for a system of equations is the point where the two lines intersect. In this case, the two given equations form a system with exactly one solution at the point (2,2). This point satisfies both equations and therefore represents the solution to the system. The other options are incorrect because they either do not satisfy both equations or do not represent a unique solution. Option B, (4,6), does not satisfy the first equation, while options C and D, (-2,-2) and (-4,-6), do not satisfy the second equation. It is important to check that the chosen solution satisfies both equations, otherwise it is not the correct solution to the system.

6. Which of these is NOT an equation of a line?

- A. $y = mx$
- B. $x+y=4$**
- C. $y=3$
- D. $2x-5y=7$

An equation of a line must include a variable raised to the first power. The options A and C both include a variable y raised to the first power, which makes them valid equations of a line. Option D also includes a variable x raised to the first power. However, option B does not feature any variables raised to the first power and is therefore not an equation of a line.

7. Which of the following is not a solution for the equation $\ln x = -1$?

A. 0.5

B. -1

C. 0

D. 0.3678

The given equation, $\ln x = -1$, can be rewritten as $e^{-1} = x$. This shows that x must be a positive value, as the value of e^{-1} is a positive number. Option B, -1, is a negative value and therefore, not a possible solution for the equation. Option A, 0.5, is a valid solution as e^{-1} is equal to approximately 0.3678. Option C, 0, is not a valid solution as $\ln 0$ is undefined. Option D, 0.3678, is the same as option A and is therefore also a valid solution.

8. 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.

9. What is the slope of the line passing through points (2,-1) and (5,1)?

A. -3

B. $-1/2$

C. 0

D. $1/2$

The slope of a line is defined as the change in y -coordinates over the change in x -coordinates. In this case, the slope can be calculated as $(1 - (-1))/(5 - 2) = 2/3$. Therefore, none of the other options are correct. Option A has the incorrect sign, as the line is upward sloping. Option C has a slope of 0, meaning the line is horizontal and does not pass through the given points. Option D has the incorrect sign and magnitude. In conclusion, the slope of the line passing through the given points is positive $2/3$, making option B the correct answer.

10. What is the result of multiplying two irrational numbers?

- A. Prime
- B. Whole
- C. Rational
- D. Irrational**

Two irrational numbers when multiplied can result in a rational number or an irrational number. However, it is more likely that the result will be an irrational number. The options of "Prime", "Whole", and "Rational" are incorrect because prime numbers are only divisible by 1 and themselves, whole numbers are integers without a fractional component, and rational numbers are numbers that can be written as a fraction of two integers. An irrational number is any number that cannot be expressed as a fraction of two integers, and this is the most likely result when multiplying two irrational numbers. Therefore, the correct answer is "D Irrational".

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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://collegemathematicscleppractice.examzify.com>

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

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