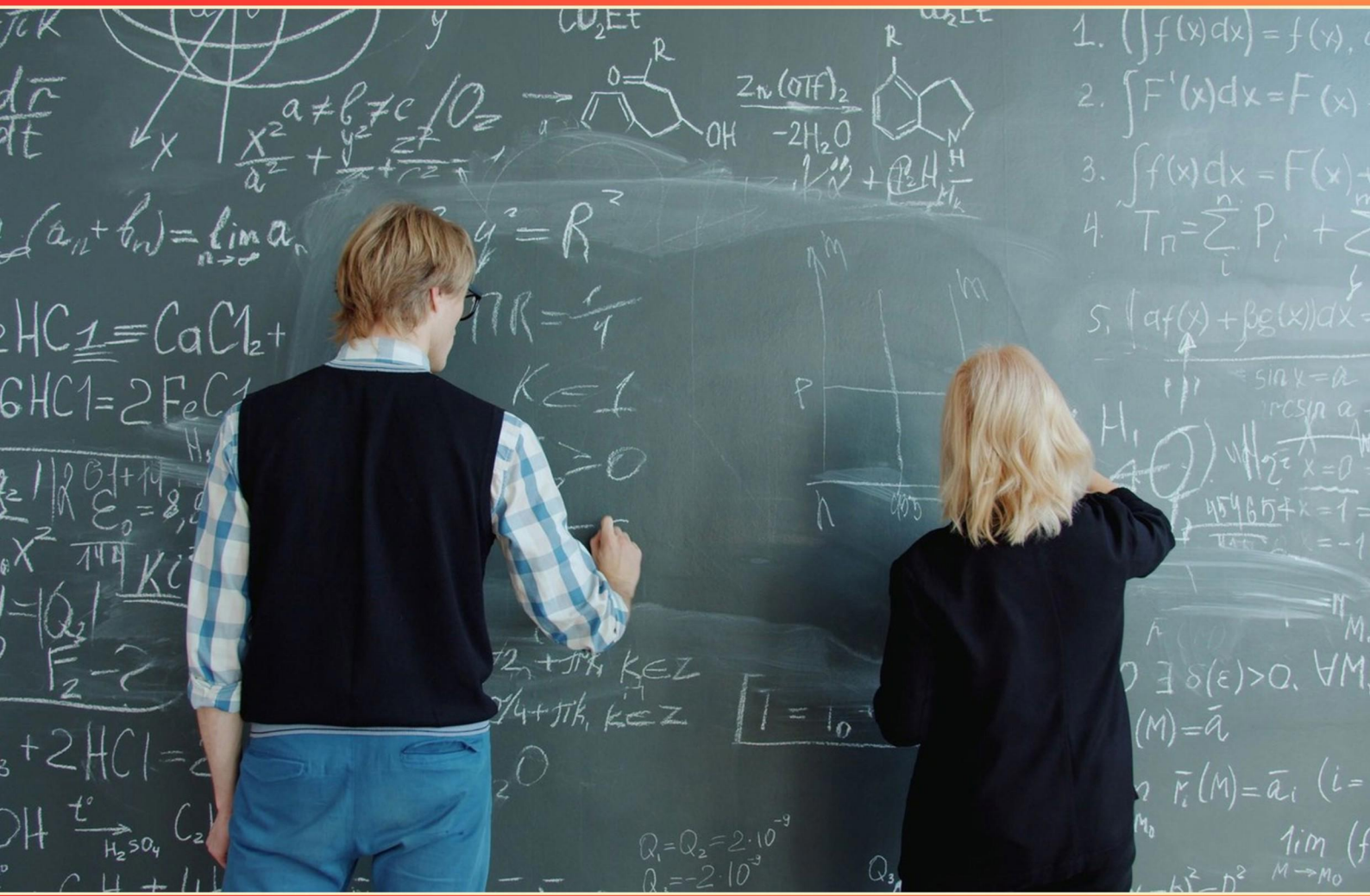
SHORMANN PRE-ALGEBRA RULES & DEFINITIONS QUARTERLY EXAM 3 PRACTICE TEST (SAMPLE)

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. In a solid, the point where two or more edges meet is called what?

A. Vertex

B. Edge

C. Face

D. Geometric Net

2. What does the radical symbol denote, and what is the radicand?

A. Radical symbol denotes square root; radicand is the number inside.

B. Radical symbol denotes cube root; radicand is the number outside.

C. Radical denotes exponent; radicand is the base.

D. Radical denotes division; radicand is the quotient.

3. Add 2 1/3 and 3 2/5. Provide the improper fraction result.

A. 83/15

B. 92/15

C. 86/15

D. 76/15

4. What does gcd stand for?

A. Greatest Common Divisor

B. Graphical Common Difference

C. General Circumpoint Derivative

D. Grand Central Difference

5. What is a deductive argument in mathematics that uses rules and definitions to reach a conclusion called?

A. Theorem

B. Postulate

C. Mathematical proof

D. Conjecture

6. Convert 3/5 to a decimal.

A. 0.6

B. 0.3

C. 1.0

D. 0.75

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7. Convert 3/8 to a decimal.

A. 0.03125

B. 0.125

C. 0.375

D. 0.25

8. What point is where the x-axis and y-axis intersect, typically (0,0)?

A. (0,0)

B. (1,0)

C. Origin

D. (0,1)

9. Evaluate 2x^2 + 3x − 5 for x = 2.

A. 7

B. 8

C. 9

D. 10

10. Define a prime number.

A. A natural number greater than 0 with at least one divisor

B. A natural number with exactly one divisor including itself

C. An integer divisible by two and three

D. A natural number greater than 1 with exactly two distinct positive divisors: 1 and itself

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Answers

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

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Explanations

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1. In a solid, the point where two or more edges meet is called what?

A. Vertex

B. Edge

C. Face

D. Geometric Net

In a solid, the point where edges come together is called a vertex. Edges are the straight boundary lines where two faces meet, and faces are the flat surfaces that bound the solid. A geometric net is just the flattened pattern of those faces used to form the solid. So the corner where two or more edges meet is a vertex. For example, a cube has eight vertices, and at each vertex three edges meet.

2. What does the radical symbol denote, and what is the radicand?

A. Radical symbol denotes square root; radicand is the number inside.

B. Radical symbol denotes cube root; radicand is the number outside.

C. Radical denotes exponent; radicand is the base.

D. Radical denotes division; radicand is the quotient.

The essential idea is understanding what the radical sign means and what the radicand is. The radical symbol is the square root sign used to indicate taking the root of a number or expression. When you see it, you're asked to find the square root of whatever is inside the symbol—the radicand. So in the expression √9, the radicand is 9, and the radical denotes the square root, which equals 3. If you ever see a small 3 on the radical (like 8), that would indicate a cube root, but the radicand is still the value inside the radical sign. Any number outside the radical is not part of the radicand; it acts as a multiplier or separate factor outside the root.

3. Add 2 1/3 and 3 2/5. Provide the improper fraction result.

A. 83/15

B. 92/15

C. 86/15

D. 76/15

When adding mixed numbers, it helps to convert them to fractions with a common denominator so you're just adding numerators over the same base. First convert each mixed number to an improper fraction: 2 1/3 becomes 7/3, and 3 2/5 becomes 17/5. The common denominator for 3 and 5 is 15, so rewrite them as 35/15 and 51/15, respectively. Add the numerators: 35/15 + 51/15 = 86/15. So the improper fraction sum is 86/15. (If you convert to a mixed number, you'd get 5 11/15, but the requested form is the improper fraction.)

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4. What does gcd stand for?

A. Greatest Common Divisor

B. Graphical Common Difference

C. General Circumpoint Derivative

D. Grand Central Difference

Greatest Common Divisor is the largest positive integer that divides each of the given integers without leaving a remainder. For example, the gcd of 48 and 180 is 12, because 12 divides both numbers and no larger number does. This idea is handy for simplifying fractions—divide both top and bottom by their gcd to get the fraction in lowest terms. It also connects to the relationship gcd(a, b) times lcm(a, b) equals a times b for positive integers. Other terms listed aren't about divisibility or common factors, so they don't describe what gcd means.

5. What is a deductive argument in mathematics that uses rules and definitions to reach a conclusion called?

A. Theorem

B. Postulate

C. Mathematical proof

D. Conjecture

In math, a deductive argument that uses rules and definitions to reach a conclusion is called a mathematical proof. A proof shows that the conclusion must be true because each step follows logically from accepted facts like axioms and definitions, with every transition justified. Theorem is the statement that has been proven, not the act of proving itself. A postulate is an assumption taken as true without proof, serving as a starting point. A conjecture is a statement believed to be true but not yet proven. So the act of using logical steps from definitions to reach a conclusion is a mathematical proof.

6. Convert 3/5 to a decimal.

A. 0.6

B. 0.3

C. 1.0

D. 0.75

Converting a fraction to a decimal means dividing the numerator by the denominator. For 3/5, divide 3 by 5. 5 goes into 3.0 zero times, then 5 goes into 30 six times with no remainder, so the decimal stops at 0.6. You can also see this by scaling: multiply top and bottom by 2 to get 6/10, which is 0.6. This works because 5 is a factor of 10, so the decimal terminates. The other numbers represent different fractions: 0.3 is 3/10, 0.75 is 3/4, and 1.0 is 5/5.

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7. Convert 3/8 to a decimal.

A. 0.03125

B. 0.125

C. 0.375

D. 0.25

Converting a fraction to a decimal is just dividing the numerator by the denominator. For 3/8, divide 3 by 8. Since 8 doesn't go into 3, add a decimal and zeros: 30 ÷ 8 = 3, so the first decimal digit is 3, giving 0.3. Remainder is 6; bring down a zero to make 60. Then 60 ÷ 8 = 7, giving 0.37. Remainder is 4; bring down a zero to make 40. Then 40 ÷ 8 = 5, giving 0.375. Since 40 − 40 = 0, the division ends. The decimal form is 0.375. You can check by multiplying back: 0.375 × 8 = 3. Another quick way is to note 3/8 = 375/1000 = 0.375.

8. What point is where the x-axis and y-axis intersect, typically (0,0)?

A. (0,0)

B. (1,0)

C. Origin

D. (0,1)

The cross point of the x-axis and y-axis is the origin. This point has coordinates (0,0) because you're at zero on both axes. Saying it another way: (0,0) describes the exact location where the two axes meet. The other coordinates describe points on the axes but not at the intersection—for example, (1,0) is one unit to the right on the x-axis, and (0,1) is one unit up on the y-axis. So the name that fits that crossing point is origin.

9. Evaluate 2x^2 + 3x − 5 for x = 2.

A. 7

B. 8

C. 9

D. 10

Evaluating a polynomial means substituting the given value for the variable and simplifying. Plug in x = 2: x^2 = 4, so 2x^2 = 8. Also, 3x = 6. Then 2x^2 + 3x − 5 becomes 8 + 6 − 5, which equals 9. So the result is 9. A different number would come from either using a different x or making a calculation error, such as forgetting to include the −5 or miscomputing a term.

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10. Define a prime number.

A. A natural number greater than 0 with at least one divisor

B. A natural number with exactly one divisor including itself

C. An integer divisible by two and three

D. A natural number greater than 1 with exactly two distinct positive divisors: 1 and itself

Prime numbers are natural numbers greater than 1 that have exactly two distinct positive divisors: 1 and the number itself. This means you cannot factor the number into a product of two smaller natural numbers. For example, 2 and 3 are prime because their only divisors are 1 and themselves; 4 is not prime because its divisors are 1, 2, and 4. Statements that say a prime is any natural number with at least one divisor are too broad, since every natural number has divisors. A claim that a prime has exactly one divisor (including itself) doesn't hold, because numbers like 1 have only one divisor, which is why primes must be greater than 1. A condition about being divisible by both 2 and 3 would pick out multiples of 6, which are never primes. So the precise definition is a natural number greater than 1 with exactly two distinct positive divisors: 1 and itself.

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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://shormannprealgebraqrt3.examzify.com

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

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