PRAXIS ELEMENTARY EDUCATION: MATHEMATICS CKT (7 813) 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 result of the expression 2 + 2 × 2?

A. 4

B. 6

C. 8

D. 10

2. What is the relationship between the radius and the circumference of a circle?

A. Directly proportional

B. Inversely proportional

C. Independent

D. Dependent on the area

3. Which of the following represents 75% as a fraction?

A. 3/4

B. 2/5

C. 5/6

D. 1/3

4. Which decimal represents the fraction of 1/5?

A. 0.2

B. 0.5

C. 0.25

D. 0.75

5. What is the square root of 49?

A. 6

B. 8

C. 7

D. 9

6. Which of the following is an example of a polygon?

A. Circle

B. Triangle

C. Sphere

D. Curve

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7. A vehicle travels at a speed of 60 miles per hour. How far does it travel in feet in 1 hour?

A. 3,960 feet

B. 4,800 feet

C. 5,280 feet

D. 6,000 feet

8. What is the next number in the sequence: 2, 4, 8, 16?

A. 24

B. 30

C. 32

D. 36

9. Which of the following is equivalent to 1 mile?

A. 1,000 yards

B. 1,760 yards

C. 2,000 yards

D. 3,000 yards

10. What is 40% expressed as a fraction in simplest terms?

A. 2/5

B. 1/2

C. 3/5

D. 1/4

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Answers

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

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Explanations

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1. What is the result of the expression 2 + 2 × 2?

A. 4

B. 6

C. 8

D. 10

To determine the result of the expression 2 + 2 × 2, it's essential to follow the order of operations, often remembered by the acronym PEMDAS, which stands for Parentheses, Exponents, Multiplication and Division (from left to right), Addition and Subtraction (from left to right). In the expression, the multiplication should be performed before the addition. Therefore, first, you calculate 2 × 2, which equals 4. Next, you add that result to the remaining 2 in the expression: 2 + 4 = 6. This shows that the correct answer is 6, which is why it is the answer to this problem. Understanding the order of operations is crucial in evaluating expressions correctly in mathematics.

2. What is the relationship between the radius and the circumference of a circle?

A. Directly proportional

B. Inversely proportional

C. Independent

D. Dependent on the area

The relationship between the radius and the circumference of a circle is directly proportional. This means that as the radius increases, the circumference also increases in a predictable manner. The formula that defines this relationship is given by the equation \(C = 2\pi r \), where \(C \) represents the circumference and \(r \) represents the radius. In this formula, \(\pi\) is a constant, which indicates that the circumference increases in a linear fashion with respect to the radius. This constant ratio signifies that for every unit increase in radius, the circumference increases by a factor of \(2\pi \). Therefore, if you were to double the radius, the circumference would also double, reaffirming the idea of direct proportionality. This clear and consistent connection is crucial in understanding properties of circles in geometry.

3. Which of the following represents 75% as a fraction?

A. 3/4

B. 2/5

C. 5/6

D. 1/3

To understand why the answer is 3/4, we start by recognizing that 75% means 75 out of 100. This can be expressed as a fraction: 75% can be written as \(\frac{75}{100}\). Next, we simplify this fraction. Both the numerator (75) and the denominator (100) can be divided by their greatest common divisor, which is 25. When we divide 75 by 25, we get 3, and when we divide 100 by 25, we get 4. Thus, \(\frac{75}{100} = \frac{3}{4}\). This fraction, 3/4, represents 75% correctly. Therefore, the correct interpretation of 75% in fractional terms is indeed 3/4.

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4. Which decimal represents the fraction of 1/5?

A. 0.2

B. 0.5

C. 0.25

D. 0.75

To convert the fraction 1/5 to a decimal, you can perform the division of the numerator by the denominator. In this case, you divide 1 by 5. When you do this division, you find that 1 divided by 5 equals 0.2. This means that one-fifth can be expressed as a decimal of 0.2. This is confirmed by the mathematical fact that when you divide 1 into 5 equal parts, each part is represented by the value of 0.2. Understanding this concept is fundamental in both recognizing equivalent fractions and in performing operations that require converting between fractions and decimals. The decimal 0.2 accurately reflects the value of the fraction 1/5.

5. What is the square root of 49?

A. 6

B. 8

C. 7

D. 9

The square root of 49 is the number that, when multiplied by itself, gives the product of 49. In this case, 7 multiplied by 7 equals 49, making 7 the correct answer. The relationship of squaring and square roots is fundamental in mathematics, where the square root is essentially the inverse operation of squaring a number. Therefore, since \(7^2 = 49\), it follows that the square root of 49 must be 7. This concept is critical in problem-solving and can be applied in various mathematical contexts, including simplifying expressions and solving equations.

6. Which of the following is an example of a polygon?

A. Circle

B. Triangle

C. Sphere

D. Curve

A polygon is defined as a closed figure made up of straight line segments that are connected end to end. These line segments are referred to as the sides of the polygon, and the points where they intersect are the vertices. In this case, a triangle meets the criteria for being a polygon as it is formed by three straight sides and three angles, making it a simple polygon. It has vertices where its sides meet, fulfilling the requirement of a closed shape made only from line segments. In contrast, a circle is not a polygon because it has a curved boundary and does not consist of straight lines. A sphere, being a three-dimensional object with a curved surface, also does not fit the polygon definition. Lastly, a curve by itself does not define a polygon because it can be open-ended and lacks the necessary straight sides and vertices that characterize polygons.

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7. A vehicle travels at a speed of 60 miles per hour. How far does it travel in feet in 1 hour?

A. 3,960 feet

B. 4,800 feet

C. 5,280 feet

D. 6,000 feet

To determine the distance a vehicle travels in feet when moving at a speed of 60 miles per hour for 1 hour, it's first essential to convert miles to feet. 1 mile is equivalent to 5,280 feet. Therefore, if the vehicle is traveling at 60 miles in one hour, the calculation for distance in feet would be: 60 miles × 5,280 feet/mile = 316,800 feet. This represents a huge error in the given answer since it calculates the correct distance traveled based on the relationship between miles and feet. So, the correct answer is that in 1 hour, at a speed of 60 miles per hour, the vehicle travels 316,800 feet. None of the provided options are accurate—indicating the result of the calculation should reflect 316,800 feet despite the options presented. This oversight underscores the importance of accurate unit conversions in calculations involving different measurement systems.

8. What is the next number in the sequence: 2, 4, 8, 16?

A. 24

B. 30

C. 32

D. 36

To identify the next number in the sequence 2, 4, 8, 16, one should observe the pattern in the progression of numbers. Each number in the sequence is obtained by multiplying the previous number by 2. Starting with 2, when multiplied by 2, we get 4. Continuing this pattern, multiplying 4 by 2 results in 8, and then multiplying 8 by 2 leads to 16. Following this consistent multiplication of 2, we take the last number in the sequence (16) and again multiply it by 2. Calculating this gives us: 16 × 2 = 32. Thus, the next number in the sequence is 32, confirming that this choice follows the established pattern of doubling each previous term in the sequence. The option representing this answer aligns perfectly with the mathematical behavior exhibited in the series.

9. Which of the following is equivalent to 1 mile?

A. 1,000 yards

B. 1,760 yards

C. 2,000 yards

D. 3,000 yards

The correct choice is based on the standard conversion between miles and yards. One mile is precisely defined as equal to 1,760 yards. This measurement is a part of the customary system of units used in the United States. Understanding this relationship is important for tasks involving distance measurement in both everyday contexts and various applications. In this context, the other choices do not reflect the accurate conversion. For instance, 1,000 yards is significantly less than a mile, and 2,000 and 3,000 yards exceed the mileage since they represent distances greater than one mile. Knowing these conversions can help prevent misunderstandings in distance-related problems.

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10. What is 40% expressed as a fraction in simplest terms?

A. 2/5

B. 1/2

C. 3/5

D. 1/4

To convert a percentage into a fraction, you start by writing the percentage as a fraction over 100. For 40%, this means you write it as 40/100. Next, you simplify the fraction. Both the numerator (40) and the denominator (100) can be divided by their greatest common divisor, which is 20 in this case. When you divide both by 20, you get: 40 ÷ 20 = 2 100 ÷ 20 = 5 This gives you the fraction 2/5. Expressing 40% as 2/5 in simplest terms accurately represents the relationship between the percentage and its fractional equivalent, which makes this option correct.

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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://praxiselemeducmathckt.examzify.com

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

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