

California Assessment of Student Performance and Progress (CAASPP) Math Practice Exam (Sample)

Study Guide



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

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1. If a triangle has angles measuring 45° and 90° , what is the measure of the third angle?
 - A. 30°
 - B. 45°
 - C. 60°
 - D. 75°

2. If a triangle has a height of 5 cm and a base of 10 cm, what is its area?
 - A. 15 cm^2
 - B. 25 cm^2
 - C. 30 cm^2
 - D. 40 cm^2

3. What does the x-intercept represent in a linear equation?
 - A. It is the value of y when $x = 0$.
 - B. It is the value of x when $y = 0$.
 - C. It is the slope of the equation.
 - D. It indicates where the line crosses the y-axis.

4. What is the result of the expression $(3 + 7) \times 2$?
 - A. 20
 - B. 16
 - C. 12
 - D. 18

5. What is a variable in mathematical terms?
 - A. A fixed number that does not change
 - B. A letter or symbol that represents a known value
 - C. A symbol that represents a missing or unknown value
 - D. A term used for whole numbers only

6. How many degrees are there in a right angle?
 - A. 45°
 - B. 90°
 - C. 180°
 - D. 360°

- 7. What is the definition of perpendicular lines?**
- A. Lines that do not meet**
 - B. Lines that always run parallel to each other**
 - C. Lines that intersect to form at least one right angle**
 - D. Lines that are curved**
- 8. What is the value of 5^2 ?**
- A. 10**
 - B. 15**
 - C. 25**
 - D. 20**
- 9. What is the probability of flipping a coin and getting heads?**
- A. $\frac{1}{4}$**
 - B. $\frac{1}{3}$**
 - C. $\frac{1}{2}$**
 - D. $\frac{1}{5}$**
- 10. What is the least common multiple (LCM) of 4 and 6?**
- A. 12**
 - B. 24**
 - C. 18**
 - D. 30**

Answers

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

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Explanations

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1. If a triangle has angles measuring 45° and 90° , what is the measure of the third angle?

- A. 30°
- B. 45°**
- C. 60°
- D. 75°

In any triangle, the sum of the interior angles is always 180° . Given that two angles in the triangle measure 45° and 90° , you can find the measure of the third angle by using the following calculation: First, add the two known angles: $45^\circ + 90^\circ = 135^\circ$. Next, subtract this sum from 180° to find the third angle: $180^\circ - 135^\circ = 45^\circ$. Thus, the measure of the third angle is 45° . This confirms that the correct answer is indeed that the third angle measures 45° , matching one of the triangle's existing angles. This means the triangle is an isosceles right triangle, where the two angles measuring 45° are equal, and the one measuring 90° is the right angle.

2. If a triangle has a height of 5 cm and a base of 10 cm, what is its area?

- A. 15 cm^2
- B. 25 cm^2**
- C. 30 cm^2
- D. 40 cm^2

To find the area of a triangle, the formula used is: $\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$. In this case, the base is 10 cm and the height is 5 cm. Plugging these values into the formula: $\text{Area} = \frac{1}{2} \times 10 \text{ cm} \times 5 \text{ cm}$. Calculating it step by step: 1. Multiply the base by the height: $10 \text{ cm} \times 5 \text{ cm} = 50 \text{ cm}^2$. 2. Now, take half of that result: $\frac{1}{2} \times 50 \text{ cm}^2 = 25 \text{ cm}^2$. Thus, the area of the triangle is correctly calculated to be 25 cm^2 . This aligns with the answer provided, showing a clear grasp of how to apply the area formula for triangles.

3. What does the x-intercept represent in a linear equation?

- A. It is the value of y when $x = 0$.
- B. It is the value of x when $y = 0$.**
- C. It is the slope of the equation.
- D. It indicates where the line crosses the y-axis.

The x-intercept of a linear equation is particularly important as it represents the point where the line crosses the x-axis. At this point, the value of y is always zero. This means that if you substitute this value into the equation, you will find that y equals zero, affirming that the x-intercept occurs when y is indeed zero. This concept is critical as it helps to graph linear equations and understand their behavior. The x-intercept provides insight into the solutions of the equation, showing the specific input value of x where the output (y) is zero, which can be pivotal for determining the roots of the equation or the points of intersection with the axes. Understanding this ensures a solid grasp of how linear functions operate within a coordinate plane.

4. What is the result of the expression $(3 + 7) \times 2$?

- A. 20
- B. 16**
- C. 12
- D. 18

To solve the expression $(3 + 7) \times 2$, it's important to follow the order of operations, often remembered by the acronym PEMDAS (Parentheses, Exponents, Multiplication and Division, Addition and Subtraction). First, we focus on the part inside the parentheses. Adding 3 and 7 gives us 10. So, we rewrite the expression as 10×2 . Next, we perform the multiplication. Multiplying 10 by 2 results in 20. Therefore, the correct result of the expression $(3 + 7) \times 2$ is 20. This indicates that the response provided does not yield the correct answer, as the answer is indeed 20. An understanding of the order of operations is essential when evaluating mathematical expressions, ensuring that operations are performed in the proper sequence to achieve accurate results.

5. What is a variable in mathematical terms?

- A. A fixed number that does not change
- B. A letter or symbol that represents a known value
- C. A symbol that represents a missing or unknown value**
- D. A term used for whole numbers only

A variable in mathematical terms is defined as a symbol that represents a missing or unknown value. This representation allows for the formulation of equations and expressions that can model real-world situations and solve problems. Variables are typically denoted by letters, such as x , y , or z , and they can take on different values depending on the context of the problem. In mathematical equations, using variables gives flexibility and the ability to describe relationships between quantities that may change. For example, in the equation $y = 2x + 5$, both y and x are variables; y changes as x changes, reflecting that they are not fixed. The other options do not accurately describe a variable. A fixed number that does not change represents a constant, while a letter or symbol that represents a known value is more akin to a constant than a variable. Lastly, the term used for whole numbers only is incorrect, as variables can represent any type of number, including integers, fractions, and decimals. Therefore, the definition of a variable as a symbol for a missing or unknown value encompasses its essential role in mathematics.

6. How many degrees are there in a right angle?

- A. 45°
- B. 90°**
- C. 180°
- D. 360°

A right angle is defined as an angle that measures exactly 90 degrees. This is a fundamental concept in geometry, representing a quarter of a full rotation. When two lines or line segments intersect at a right angle, they form a square corner, which is visually recognizable in everyday objects and structures. In the context of angles, 45 degrees represents an acute angle, which is less than 90 degrees, while 180 degrees corresponds to a straight angle, illustrating a half rotation. A full rotation is measured at 360 degrees. Therefore, understanding that a right angle specifically measures 90 degrees is crucial for geometry and is foundational for creating perpendicular lines and understanding more complex geometric concepts.

7. What is the definition of perpendicular lines?

- A. Lines that do not meet
- B. Lines that always run parallel to each other
- C. Lines that intersect to form at least one right angle**
- D. Lines that are curved

Perpendicular lines are defined as lines that intersect at a right angle, which is an angle measuring 90 degrees. This specific characteristic distinguishes perpendicular lines from other types of lines. When two lines meet to form at least one right angle, they are classified as perpendicular. This relationship is fundamental in geometry, particularly when analyzing shapes, angles, and various properties of figures. While some of the other definitions might describe different relationships between lines, they do not capture the essence of perpendicularity. For instance, lines that do not meet are classified as parallel or non-intersecting, and lines that run parallel to each other maintain a consistent distance apart, never meeting. Curved lines, on the other hand, do not fit within the definition of straight, intersecting lines.

8. What is the value of 5^2 ?

- A. 10
- B. 15
- C. 25**
- D. 20

The value of 5^2 is calculated by multiplying 5 by itself. In this case: $5^2 = 5 \times 5 = 25$. This demonstrates the definition of squaring a number, which involves taking the base (in this scenario, 5) and multiplying it by itself. Hence, the correct answer, 25, accurately reflects the result of this operation. Other options do not correspond to the mathematical calculation of squaring 5.

9. What is the probability of flipping a coin and getting heads?

- A. $\frac{1}{4}$
- B. $\frac{1}{3}$
- C. $\frac{1}{2}$**
- D. $\frac{1}{5}$

The probability of flipping a coin and getting heads is determined by considering the total possible outcomes and the favorable outcomes. When flipping a standard coin, there are two possible outcomes: heads or tails. Since these outcomes are equally likely, the probability of obtaining either heads or tails can be calculated by taking the number of favorable outcomes (which is 1 for heads) and dividing it by the total number of outcomes (which is 2). Thus, the calculation for the probability of getting heads is: Probability of heads = Number of favorable outcomes / Total number of outcomes = $\frac{1}{2}$. This means that there is a 50% chance of getting heads when you flip a coin, which aligns with the correct answer. Options representing fractions such as $\frac{1}{4}$, $\frac{1}{3}$, and $\frac{1}{5}$ do not accurately reflect the simple scenario of a coin flip, as they indicate probabilities that are inconsistent with the two equally likely outcomes of heads or tails.

10. What is the least common multiple (LCM) of 4 and 6?

- A. 12**
- B. 24
- C. 18
- D. 30

The least common multiple (LCM) of two numbers is the smallest multiple that both numbers share. To find the LCM of 4 and 6, one effective method is to list the multiples of each number. For 4, the multiples are: 4, 8, 12, 16, 20, 24, ... For 6, the multiples are: 6, 12, 18, 24, 30, ... By comparing the lists, the smallest number that appears in both lists is 12. This means that 12 is the first common multiple of both 4 and 6, identifying it as the LCM. Finding the LCM efficiently can also be done using the prime factorization method. The prime factors of 4 are 2×2 , and for 6, they are 2×3 . To calculate the LCM, take the highest power of each prime factor appearing in these factorizations. Here, the highest powers are 2 (from 4) and 3 (from 6), resulting in $2^2 \times 3 = 4 \times 3 = 12$. Therefore, the least common multiple of 4 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://caaspp-math.examzify.com>

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

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