

# Preliminary SAT (PSAT) Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

**This is a sample study guide. To access the full version with hundreds of 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.

# 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. Don't worry about getting everything right, 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, and take breaks to retain information better.**

## **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.**

## **7. Use Other Tools**

**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

1. What does the distance formula  $\text{distance} = \text{rate} \times \text{time}$  compute?
  - A. Distance traveled at a steady speed
  - B. Time taken to cover a distance
  - C. Rate of distance traveled
  - D. Speed multiplied by duration
2. Which process involves multiplying the first, inner, outer, and last terms of two binomials?
  - A. Factoring
  - B. Distributive Property
  - C. FOIL
  - D. Polynomial Long Division
3. What does  $(x^a)^b$  equal according to exponent rules?
  - A.  $x^{(a-b)}$
  - B.  $x^{ab}$
  - C.  $1/x^a$
  - D.  $x^{a/b}$
4. Which word functions as the subject in a sentence?
  - A. Who
  - B. Whom
  - C. Which
  - D. That
5. Which term refers to items that cannot be easily counted?
  - A. Less
  - B. Fewer
  - C. Many
  - D. Several
6. What is the first step in calculating the standard deviation?
  - A. Calculate the mean of the data points
  - B. Square each of the data points
  - C. Find the median of the set
  - D. Identify the mode of the data



- 7. What does a positive correlation indicate about two variables?**
- A. One variable increases while the other decreases**
  - B. The relationship is represented by a constant slope**
  - C. Both variables increase or both decrease**
  - D. There is no relationship between the variables**
- 8. Which of the following statements is true regarding trigonometric identities?**
- A. They only apply to right-angled triangles.**
  - B. They are equalities involving trigonometric functions.**
  - C. They apply only to angles less than 90 degrees.**
  - D. They are limited to use in geometry only.**
- 9. What are the angles in a 45-45-90 triangle?**
- A.  $30^\circ$ ,  $60^\circ$ ,  $90^\circ$**
  - B.  $45^\circ$ ,  $45^\circ$ ,  $90^\circ$**
  - C.  $90^\circ$ ,  $90^\circ$ ,  $0^\circ$**
  - D.  $60^\circ$ ,  $30^\circ$ ,  $90^\circ$**
- 10. Which word is used to indicate a position of rest?**
- A. Lie**
  - B. Lay**
  - C. Set**
  - D. Place**

## **Answers**

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

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## **Explanations**

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1. What does the distance formula  $\text{distance} = \text{rate} \times \text{time}$  compute?

**A. Distance traveled at a steady speed**

B. Time taken to cover a distance

C. Rate of distance traveled

D. Speed multiplied by duration

The distance formula, expressed as distance equals rate multiplied by time, is fundamentally used to calculate the total distance covered when traveling at a consistent speed for a specific duration. This means that if you know how fast an object is moving (the rate) and for how long it has been moving (the time), you can determine the entire distance it has traveled. For example, if a car is traveling at a speed of 60 miles per hour for 2 hours, the distance it covers can be calculated by multiplying the speed (rate) by the time, resulting in 120 miles. This clear relationship between distance, rate, and time confirms why the correct choice is about the distance traveled at a steady speed.

2. Which process involves multiplying the first, inner, outer, and last terms of two binomials?

A. Factoring

B. Distributive Property

**C. FOIL**

D. Polynomial Long Division

The process that involves multiplying the first, inner, outer, and last terms of two binomials is known as FOIL. This acronym specifically helps in remembering the steps necessary to multiply two binomials effectively. When you apply FOIL, you systematically execute the multiplication in the following order: 1. **First**: Multiply the first terms of each binomial. 2. **Outer**: Multiply the outer terms. 3. **Inner**: Multiply the inner terms. 4. **Last**: Multiply the last terms of each binomial. This method ensures that all the necessary product combinations are accounted for when expanding the expression. By following these steps, you arrive at a single trinomial or polynomial that represents the product of the two binomials. In contrast, factoring is the process of breaking down a polynomial into its component factors, and the distributive property involves one term being multiplied by each term inside parentheses. Polynomial long division deals with dividing one polynomial by another and is a more complex process not directly related to the multiplication of binomials. Thus, FOIL is the precise term that encapsulates this specific multiplication method.

**3. What does  $(x^a)^b$  equal according to exponent rules?**

A.  $x^{(a-b)}$

**B.  $x^{ab}$**

C.  $1/x^a$

D.  $x^a/b$

The expression  $(x^a)^b$  can be simplified using the power of a power rule in exponents. This rule states that when raising a power to another power, you multiply the exponents. Therefore,  $(x^a)^b$  simplifies to  $x^{a \cdot b}$ . This means that the base  $(x)$  retains its value while the exponents  $(a)$  and  $(b)$  are combined through multiplication. Consequently,  $(x^a)^b$  is equal to  $x^{ab}$ , which confirms that the correct answer is indeed  $x^{ab}$ . Understanding this rule is fundamental as it applies universally to any base and any exponents, allowing for consistent simplification across various algebraic contexts.

**4. Which word functions as the subject in a sentence?**

**A. Who**

B. Whom

C. Which

D. That

The word "who" functions as the subject in a sentence because it is a pronoun used to refer to the person or people performing an action or being described in a clause. When "who" is used to ask a question or to introduce a clause, it stands in for a subject position, thus fulfilling the role of the subject. For example, in the question "Who is coming to the party?" "who" is the subject because it refers to the person who is performing the action of coming to the party. In contrast, the other options serve different grammatical purposes. "Whom" is used as an object pronoun, referring to the person who is receiving the action rather than performing it. "Which," on the other hand, is typically used to introduce non-defining relative clauses or to ask questions about one or more items in a selection and does not function as a subject. "That" is often used to introduce restrictive clauses and can refer to things or people but also does not serve as a subject in the same manner as "who."

**5. Which term refers to items that cannot be easily counted?**

**A. Less**

B. Fewer

C. Many

D. Several

The term that refers to items that cannot be easily counted is "less." In English grammar, "less" is typically used with uncountable nouns, such as substances or concepts that cannot be quantified individually. For example, one would say "less water" or "less sugar" because these items do not have distinct, countable units. In contrast, "fewer" is used with countable nouns, emphasizing a reduction in the number of discrete items, like "fewer apples" or "fewer people." "Many" and "several" also suggest bulk or quantity but typically apply to countable items and do not fit the definition of what cannot be easily counted. Therefore, "less" is the most appropriate choice when referring to items that are not straightforwardly quantifiable.

**6. What is the first step in calculating the standard deviation?**

**A. Calculate the mean of the data points**

**B. Square each of the data points**

**C. Find the median of the set**

**D. Identify the mode of the data**

To calculate the standard deviation, the first step is to calculate the mean of the data points. The mean, or average, is essential because standard deviation measures how spread out the numbers in a data set are from the mean. Once the mean is determined, you can then proceed to the next steps in the standard deviation calculation, which include finding the differences between each data point and the mean, squaring those differences, averaging the squared differences, and finally taking the square root of that average. In this context, starting with the mean provides a baseline from which the variations of each data point can be analyzed, making it a critical first step in the process of finding the standard deviation. The other options, while related to data analysis, do not serve as the necessary starting point for calculating standard deviation.

**7. What does a positive correlation indicate about two variables?**

**A. One variable increases while the other decreases**

**B. The relationship is represented by a constant slope**

**C. Both variables increase or both decrease**

**D. There is no relationship between the variables**

A positive correlation indicates that as one variable increases, the other variable also tends to increase, or similarly, as one variable decreases, the other variable tends to decrease as well. This means that both variables move in the same direction. For example, if you were to look at the relationship between studying hours and test scores, a positive correlation would suggest that more study hours are associated with higher test scores. This type of correlation is represented graphically on a scatter plot with a trend line that slopes upward. In such cases, the relationship is consistent, showcasing that fluctuations in one variable correspond with similar fluctuations in the other. The other options do not accurately describe a positive correlation. One variable increasing while the other decreases indicates a negative correlation. A constant slope refers to a linear relationship but does not specify whether that relationship is positive or negative. Lastly, stating that there is no relationship between the variables would imply a correlation of zero, which contradicts the idea of a positive correlation.

**8. Which of the following statements is true regarding trigonometric identities?**

**A. They only apply to right-angled triangles.**

**B. They are equalities involving trigonometric functions.**

**C. They apply only to angles less than 90 degrees.**

**D. They are limited to use in geometry only.**

Trigonometric identities are fundamental equalities that hold true for all values of the angles involved in the functions, not just specific cases. By definition, they are expressions that relate various trigonometric functions to each other, such as the Pythagorean Identity ( $\sin^2(x) + \cos^2(x) = 1$ ) and other relationships like the angle addition formulas. This universality makes them integral to various branches of mathematics, including calculus and algebra, beyond just geometry. In contrast to the other statements, which impose restrictions or limitations on the application of trigonometric identities, the correct statement accurately reflects their broad applicability and importance in mathematical analysis and problem-solving. Therefore, identifying that trigonometric identities are equalities involving trigonometric functions underscores their role as essential tools in various mathematical contexts.

**9. What are the angles in a 45-45-90 triangle?**

**A. 30°, 60°, 90°**

**B. 45°, 45°, 90°**

**C. 90°, 90°, 0°**

**D. 60°, 30°, 90°**

In a 45-45-90 triangle, the angles are precisely 45°, 45°, and 90°. This is a special type of right triangle where the two non-hypotenuse sides are of equal length, leading to the two angles opposite these sides being equal as well, which are both 45°. The remaining angle, being the right angle, measures 90°. The relationship in a 45-45-90 triangle provides a consistent ratio of the sides as well: both legs (the sides opposite the 45° angles) are of equal length, and the hypotenuse (the side opposite the 90° angle) is  $\sqrt{2}$  times longer than each leg. This characteristic makes it a fundamental triangle in geometry, especially in problems involving trigonometry or square-root measurements. The other choices present angles that do not represent a 45-45-90 triangle. The first option depicts a 30°-60°-90° triangle, which has a different set of ratios and angle relations. The third option incorrectly suggests angles that cannot form a triangle due to adding up to more than 180°, and the last choice again presents angles of a different triangle type. Thus, the given angles in the selected



**10. Which word is used to indicate a position of rest?**

**A. Lie**

**B. Lay**

**C. Set**

**D. Place**

The word "lie" is used to indicate a position of rest, as it refers to the act of reclining or being in a horizontal position. For example, when one says, "I will lie down," they are indicating that they intend to assume a resting position. This usage highlights the state of being in repose without the implication of placing something down, which is where the other words might diverge in meaning. "Lay" typically requires a direct object and means to put something down. "Set" also denotes an action of placing an object in a particular position and usually involves a direct object as well. "Place," similar to "set," involves the action of putting something somewhere, and does not connote a state of rest or lying down. Therefore, "lie" is distinctly appropriate for expressing a position of rest.

## 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://prelimenarysat.examzify.com>**

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