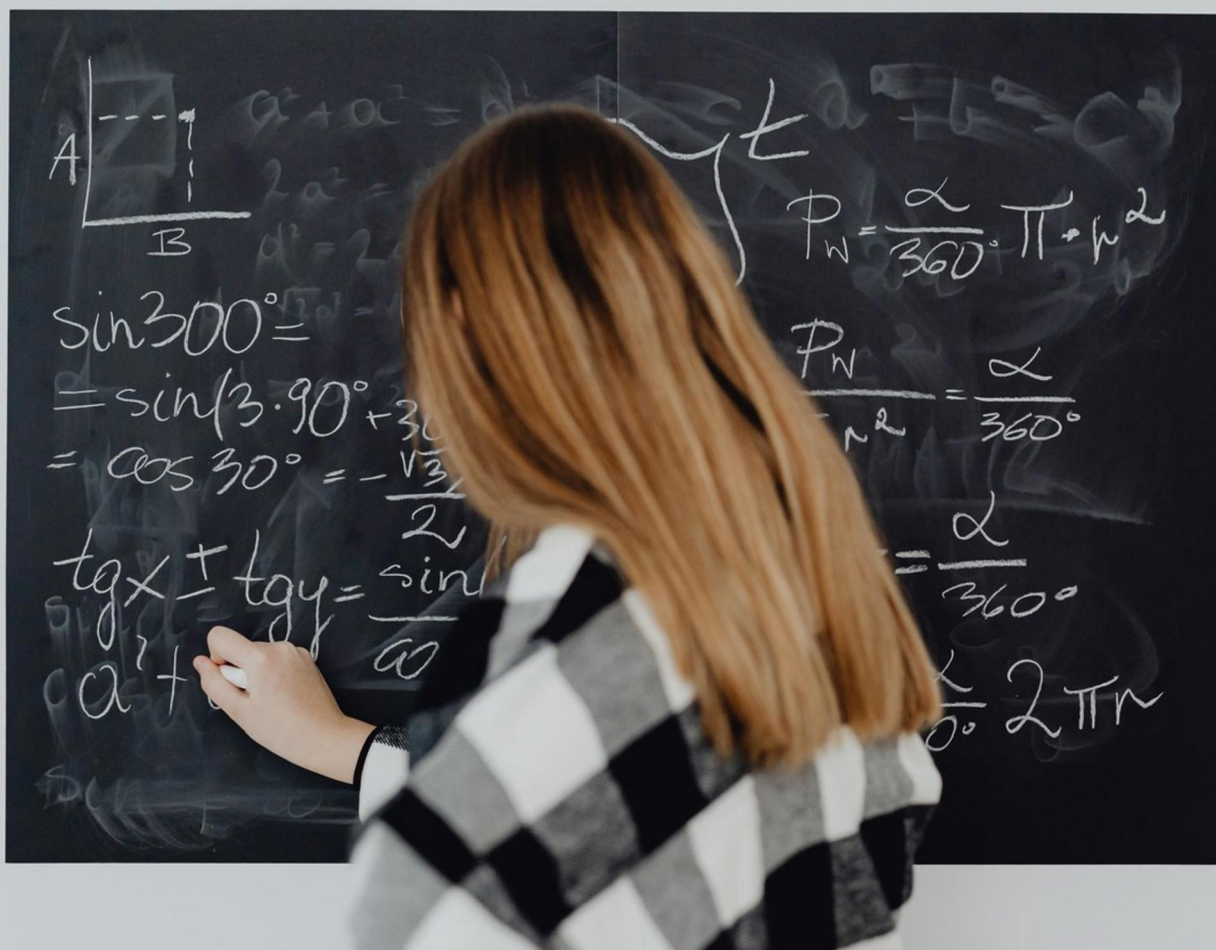


PSAT 8/9 MATH PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://psat8thand9thmath.examzify.com>



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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	14

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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 sum of the interior angles in any triangle?
- A. 180 degrees
 - B. 360 degrees
 - C. 90 degrees
 - D. 270 degrees
2. Which term is defined as the middle score in a distribution?
- A. The middle score in a distribution
 - B. The most frequently occurring score in a distribution
 - C. The sum of a sequence
 - D. The average of all scores
3. Parallel lines have what type of slopes?
- A. EQUAL
 - B. OPPOSITE
 - C. INVERTED
 - D. DIFFERENT
4. A bag contains r red and b blue balls. If $r/(r+b) = 1/3$ and $r = 2$, what is b ?
- A. 3
 - B. 4
 - C. 2
 - D. 5
5. In a triangle, two angles measure 40° and 70° . What is the measure of the third angle?
- A. 60
 - B. 50
 - C. 80
 - D. 70

6. A price increases by 50% and then decreases by 50% of the new amount. Is it back to the original price?
- A. Yes
 - B. No
 - C. It depends
 - D. Not determinable
7. What is $7 - 5^0$?
- A. 5
 - B. 6
 - C. 7
 - D. 8
8. A car travels at 60 mph for 2 hours and 75 mph for 1 hour. What is the average speed for the trip?
- A. 60 mph
 - B. 65 mph
 - C. 58 mph
 - D. 62 mph
9. If $|x - 4| = 0$, what is x ?
- A. 0
 - B. -4
 - C. 4
 - D. 8
10. Area of a trapezoid with bases 10 and 4 and height 3 is?
- A. 18
 - B. 21
 - C. 24
 - D. 30

Answers

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

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Explanations

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1. What is the sum of the interior angles in any triangle?

- A. 180 degrees**
- B. 360 degrees
- C. 90 degrees
- D. 270 degrees

In a triangle, the three interior angles always add up to 180 degrees. A quick way to see this is to draw a line through the top vertex that is parallel to the base. The two angles at the base then correspond to the other two interior angles of the triangle, so all three angles line up along a straight line and sum to 180 degrees. Another way to view it is the general rule for polygon angles: for a triangle (three sides), $(n-2) \times 180 = (3-2) \times 180 = 180$. The other numbers don't fit a triangle's interior angles: 360 degrees is the sum for shapes with four sides (or angles around a point), 90 degrees is just a single angle, and 270 degrees isn't the sum of a triangle's interior angles.

2. Which term is defined as the middle score in a distribution?

- A. The middle score in a distribution**
- B. The most frequently occurring score in a distribution
- C. The sum of a sequence
- D. The average of all scores

The middle score in a distribution is called the median. To find it, line all the scores up from smallest to largest and pick the value right in the middle. If there's an odd number of scores, there's a single middle value. If there's an even number, the median is the average of the two central values. The median represents a typical center less swayed by extreme values than the mean. The other ideas refer to different concepts: the mode is the most frequent score, the sum is the total when you add all scores, and the average (mean) is the total divided by how many scores there are. So the middle value is the median.

3. Parallel lines have what type of slopes?

- A. EQUAL**
- B. OPPOSITE
- C. INVERTED
- D. DIFFERENT

Parallel lines have the same steepness, so their slopes are equal. The slope is the ratio of vertical change to horizontal change (rise over run), and when two lines share the same slope, they rise and run at the same rate. If they also have different intercepts, they stay a fixed distance apart and never intersect, which is what makes them parallel. A vertical pair is a special case where the slope is undefined, but both lines still share the same type of slope, so they're parallel as well. Choices like opposite, inverted, or different slopes would lead to lines that intersect or don't align in the same way, so they don't describe parallel lines.

4. A bag contains r red and b blue balls. If $r/(r+b) = 1/3$ and $r = 2$, what is b ?

- A. 3
- B. 4**
- C. 2
- D. 5

The ratio of red balls to the total is $1/3$, so red represents one third of all balls. If there are r red balls, then $r + b = 3r$, which gives $b = 2r$. With $r = 2$, $b = 4$. Quick check: $2/(2+4) = 2/6 = 1/3$, which fits. So there are 4 blue balls.

5. In a triangle, two angles measure 40° and 70° . What is the measure of the third angle?

- A. 60
- B. 50
- C. 80
- D. 70**

In any triangle, the three interior angles add up to 180 degrees. The two given angles total $40^\circ + 70^\circ = 110^\circ$. Subtracting from 180° leaves 70° . So the third angle is 70° . Quick check: $40^\circ + 70^\circ + 70^\circ = 180^\circ$. The other options would not sum to 180° (for example, 60° would give 170° , 50° would give 160° , and 80° would give 190°).

6. A price increases by 50% and then decreases by 50% of the new amount. Is it back to the original price?

- A. Yes
- B. No**
- C. It depends
- D. Not determinable

Think of percent changes as multiplying by a factor. A 50% increase makes the price 1.5 times bigger. Then decreasing by 50% of that new amount multiplies by 0.5, giving $1.5 \times 0.5 = 0.75$ of the original. So you end up at 75% of the starting price, not back to the original. For example, start at \$100. \$150 after the increase, then drop by half of \$150 to \$75. That final \$75 is \$25 less than the start. To get back to the original, you'd need a different amount of decrease (or an increase) from the new amount.

7. What is $7 - 5^0$?

- A. 5
- B. 6**
- C. 7
- D. 8

Any nonzero number raised to the power of zero equals 1, so $5^0 = 1$. Subtract that from 7: $7 - 1 = 6$. The result is 6. A common mistake is thinking 5^0 is 0, which would give 7.

8. A car travels at 60 mph for 2 hours and 75 mph for 1 hour. What is the average speed for the trip?

- A. 60 mph
- B. 65 mph**
- C. 58 mph
- D. 62 mph

When speeds vary, average speed equals total distance divided by total time. The car covers 60 mph for 2 hours (120 miles) and 75 mph for 1 hour (75 miles). That's 195 miles in 3 hours, so the average speed is $195 \div 3 = 65$ mph. You can also see this as a time-weighted average: 60 mph for two-thirds of the time and 75 mph for one-third, giving $60 \cdot (2/3) + 75 \cdot (1/3) = 65$ mph.

9. If $|x - 4| = 0$, what is x?

- A. 0
- B. -4
- C. 4**
- D. 8

Absolute value is the distance from zero, so it equals zero only when the inside expression is zero. Here that means $x - 4 = 0$, giving $x = 4$. Checking: $|4 - 4| = 0$, which matches the condition. If x is any other number, $x - 4$ isn't zero, so the absolute value would be positive, not zero. Therefore, x is 4.

10. Area of a trapezoid with bases 10 and 4 and height 3 is?

- A. 18
- B. 21**
- C. 24
- D. 30

Area of a trapezoid is found by taking the average of the two bases and multiplying by the height. With bases 10 and 4, the average is $(10 + 4) / 2 = 7$. Multiply by the height 3 to get $7 \times 3 = 21$. So the area is 21, which is the correct value. A common slip is using the sum of the bases without dividing by 2, which would give 14, or using the difference of the bases times height, which would give 18; these are not the right formula for trapezoid area.

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://psat8thand9thmath.examzify.com>

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

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