

MSTEP 3rd Grade Math Practice Test (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. Which symbol is used to denote mass in the metric system?**
 - A. kg**
 - B. m**
 - C. L**
 - D. s**

- 2. Which term describes a set of related multiplication facts using the same numbers?**
 - A. Parallel Lines**
 - B. Rectilinear Figure**
 - C. Fact Family**
 - D. Symmetry**

- 3. Which term describes when one number is larger than another, as in $65 > 56$?**
 - A. Less Than**
 - B. Greater Than**
 - C. Equals**
 - D. Approximately**

- 4. What do you call a mathematical sentence that contains an equals sign?**
 - A. Expression**
 - B. Equation**
 - C. Identity**
 - D. Proposition**

- 5. What kind of angle measures less than 90 degrees?**
 - A. Obtuse angle**
 - B. Straight angle**
 - C. Acute angle**
 - D. Right angle**

- 6. Which description correctly defines a sphere?**
- A. A perfectly round solid with no faces, edges, or vertices.**
 - B. A prism with six square faces.**
 - C. A solid with one curved surface and two congruent bases.**
 - D. A solid with six faces that are all squares.**
- 7. Which solid has no edges?**
- A. Sphere**
 - B. Cylinder**
 - C. Cube**
 - D. Pyramid**
- 8. Which solid has two congruent circular bases?**
- A. Cone**
 - B. Cylinder**
 - C. Sphere**
 - D. Prism**
- 9. Which solid has a curved surface and two congruent circular bases?**
- A. Sphere**
 - B. Cone**
 - C. Cube**
 - D. Cylinder**
- 10. In a fraction, which term refers to the top number?**
- A. Area**
 - B. Denominator**
 - C. Numerator**
 - D. Fraction**

Answers

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

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Explanations

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1. Which symbol is used to denote mass in the metric system?

- A. kg**
- B. m**
- C. L**
- D. s**

Mass in the metric system is measured using the kilogram, the standard unit for mass. The symbol for kilogram is kg. One kilogram equals 1000 grams, so kg is used for heavier items. The other symbols represent different kinds of measurements: m is for meters (length), L is for liters (volume), and s is for seconds (time). Remembering that kg stands for mass helps you read and compare how much matter objects contain.

2. Which term describes a set of related multiplication facts using the same numbers?

- A. Parallel Lines**
- B. Rectilinear Figure**
- C. Fact Family**
- D. Symmetry**

The main idea is recognizing a fact family: a group of related multiplication facts that share the same numbers (and often the corresponding division facts as well). For example, using the numbers 2 and 3, you get $2 \times 3 = 6$ and $3 \times 2 = 6$, and the related division facts $6 \div 2 = 3$ and $6 \div 3 = 2$. All of these facts use the same numbers, just arranged differently, so they form one fact family. That's why this term is the best fit. It specifically describes a set of related multiplication facts that use the same numbers, and it naturally includes the idea that those facts are connected through inverse operations (multiplication and division). Other terms point to different ideas. Parallel lines describe two lines that never meet. A rectilinear figure is made of straight-line segments, often with right angles. Symmetry means a figure has a mirrored balance across a line or around a point.

3. Which term describes when one number is larger than another, as in $65 > 56$?

- A. Less Than**
- B. Greater Than**
- C. Equals**
- D. Approximately**

Understanding when one number is larger than another is about using the greater-than relationship. The symbol " $>$ " reads as "is greater than." So in $65 > 56$, 65 is larger than 56, which is exactly what greater than expresses. This is the precise way to name the relationship between two numbers when the left one is bigger. Other ideas describe different relationships: less than means the first number is smaller than the second, equals means both numbers are the same, and approximately means the numbers are close but not exactly the same. So the right description for 65 and 56 is greater than.

4. What do you call a mathematical sentence that contains an equals sign?

- A. Expression
- B. Equation**
- C. Identity
- D. Proposition

An equation is a mathematical sentence that uses an equals sign to say two expressions are equal. It can be true or false, and it often involves numbers, variables, or both. For example, $3 + 4 = 7$ is an equation because it claims the left side equals the right side. If an equation is true for every possible value of the variable, it's called an identity, like $x + x = 2x$, which always holds. An expression, by contrast, is just a mathematical phrase like $3 + 4$ or $2x$ —there's no equals sign making a claim. A proposition is a general statement that can be true or false, not necessarily in the form of an equation.

5. What kind of angle measures less than 90 degrees?

- A. Obtuse angle
- B. Straight angle
- C. Acute angle**
- D. Right angle

Angles are described by how wide they open. When an angle opens less than a right angle, it's called acute. That means it's smaller than 90 degrees, which is exactly what the question is asking for. For reference, an obtuse angle opens wider than a right angle (more than 90 degrees but less than 180), a straight angle is a straight line at 180 degrees, and a right angle is exactly 90 degrees. So the type that measures less than 90 degrees is an acute angle.

6. Which description correctly defines a sphere?

- A. A perfectly round solid with no faces, edges, or vertices.**
- B. A prism with six square faces.
- C. A solid with one curved surface and two congruent bases.
- D. A solid with six faces that are all squares.

A sphere is defined by being perfectly round all the way around, with no flat faces, no edges, and no vertices. This means every point on its surface is the same distance from a center point, creating a smooth, continuous curved surface. The description that says a perfectly round solid with no faces, edges, or vertices matches this idea exactly. The other descriptions point to different shapes: a solid with six square faces is a cube, which has edges and corners; a solid with one curved surface and two congruent bases is a cylinder, which has circular bases and a curved side; a solid with six faces that are all squares is also a cube.

7. Which solid has no edges?

- A. Sphere**
- B. Cylinder**
- C. Cube**
- D. Pyramid**

Edges are the lines where two faces meet. A sphere has a single, smooth curved surface with no flat faces, so there are no lines where faces come together—no edges. A cylinder has a curved side plus two circular bases, and the places where the curved surface meets each base form edges. A cube has many straight edges where its square faces meet. A pyramid also has edges where its triangular faces join. So the sphere is the one with no edges.

8. Which solid has two congruent circular bases?

- A. Cone**
- B. Cylinder**
- C. Sphere**
- D. Prism**

The concept here is identifying a solid by its bases. The cylinder is the shape that has two parallel, congruent circular bases connected by a curved surface. Congruent means the two circular bases are the same size and shape, so you have exactly two circles at the ends. Think about the other shapes: a cone has one circular base and a pointed tip, so it doesn't have two bases. A sphere has no bases at all. A prism has two bases too, but those bases are polygons (like rectangles or triangles), not circles. So it doesn't fit the description of two congruent circular bases. Because it uniquely has two identical circular bases, the cylinder is the correct solid.

9. Which solid has a curved surface and two congruent circular bases?

- A. Sphere**
- B. Cone**
- C. Cube**
- D. Cylinder**

A cylinder is the solid with a curved surface and two congruent circular bases. Think of a can or a drum: it has two ends that are circles of the same size, and the side around them is curved. That combination—curved outer surface plus two equal circular bases—fits the description exactly. A sphere is all curved with no bases, a cone has a curved surface but only one base, and a cube has flat faces with no curved surface. So the shape that matches is the cylinder.

10. In a fraction, which term refers to the top number?

- A. Area
- B. Denominator
- C. Numerator**
- D. Fraction

In a fraction, we're looking at parts of a whole. The top number shows how many parts we're talking about, while the bottom number shows how many equal parts the whole is divided into. The term for the top number is the numerator. For example, in $\frac{3}{4}$, three parts are being considered, so three is the numerator. The bottom number is the denominator, which would be four in that same fraction. Area isn't used to describe the parts of a fraction, and a fraction is the whole thing, not the name of the top number.

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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://mstep3rdgrademath.examzify.com>

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

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