

MATHNASIUM JOB ASSESSMENT PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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. How do you calculate the circumference of a circle?

- A. $2\pi r$
- B. πd
- C. $3.14r$
- D. $d\pi$

2. What is the formula for the area of a triangle?

- A. $A = bh$
- B. $A = (1/2)bh$
- C. $A = lwh$
- D. $A = 2bh$

3. What is the greatest common factor (GCF) of 12 and 15?

- A. 1
- B. 3
- C. 5
- D. 6

4. What is 15% of 300?

- A. 60
- B. 45
- C. 50
- D. 30

5. What is 15% of 200?

- A. 25
- B. 30
- C. 35
- D. 40

6. How many ounces are in one pound?

- A. 8 ounces
- B. 12 ounces
- C. 16 ounces
- D. 20 ounces

7. If you have 8 cups, how many pints do you have?

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

8. What is the formula for finding the mean of a data set?

- A. Mean = (Max value) / (Number of values)
- B. Mean = (Sum of all values) / (Number of values)
- C. Mean = (Min value) + (Max value)
- D. Mean = (Total count of values) / (Sum of values)

9. What is the slope formula used in coordinate geometry?

- A. $(y_2 - y_1)/(x_2 - x_1)$
- B. $(y_1 + y_2)/(x_1 + x_2)$
- C. $(y_2 + y_1)/(x_2 - x_1)$
- D. $(y_2 - y_1)/(x_1 + x_2)$

10. What is the term for a number that can be expressed as a fraction of two integers?

- A. Real Number
- B. Rational Number
- C. Whole Number
- D. Complex Number

Answers

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

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Explanations

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1. How do you calculate the circumference of a circle?

- A. $2\pi r$
- B. πd
- C. $3.14r$
- D. $d\pi$

The correct way to calculate the circumference of a circle is to use the formula $2\pi r$, where r represents the radius of the circle. This formula arises from the relationship between the radius and the total distance around the circle. The rationale behind this formula is based on the definition of π , which is the ratio of the circumference of a circle to its diameter. Since the diameter (d) is twice the radius (r), you can rearrange the formula for circumference, which can also be expressed as π times the diameter (πd). Therefore, since the diameter is $2r$, you can substitute to find that the circumference can also be expressed as 2 times π times the radius. Both $2\pi r$ and πd give you the same result, as they are simply two different ways of expressing the same calculation based on the radius and diameter respectively. This explains why the choice involving $2\pi r$ is recognized as a fundamental formula in geometry for determining the circumference of a circle.

2. What is the formula for the area of a triangle?

- A. $A = bh$
- B. $A = (1/2)bh$
- C. $A = lwh$
- D. $A = 2bh$

The formula for the area of a triangle is $A = (1/2)bh$, where A represents the area, b is the base of the triangle, and h is the height measured from the base to the opposite vertex. This formula comes from the understanding that the area of a triangle is essentially half the area of a rectangle. When you take a rectangle's area, you multiply the base by the height ($A = bh$). Since a triangle occupies half of that rectangle when split diagonally, you factor in the $1/2$ to determine the area of the triangle. The other formulas presented do not apply to the area of a triangle: $A = bh$ would be correct for a rectangle, $A = lwh$ is for the volume of a rectangular prism, and $A = 2bh$ does not represent the area of a triangle but would incorrectly suggest that the area is double that of a triangle's area.

3. What is the greatest common factor (GCF) of 12 and 15?

- A. 1
- B. 3
- C. 5
- D. 6

To determine the greatest common factor (GCF) of 12 and 15, we begin by identifying the factors of each number. The factors of 12 are: 1, 2, 3, 4, 6, 12. The factors of 15 are: 1, 3, 5, 15. Next, we find the common factors from these two lists, which are the numbers that appear in both sets of factors. The common factors of 12 and 15 are: 1 and 3. Among these common factors, the greatest one is 3. Hence, the GCF of 12 and 15 is 3, making this the correct answer. This method illustrates how to systematically identify factors and determine the greatest common factor, which is a fundamental skill in number theory and is useful for simplifying fractions, solving problems involving divisibility, and working with ratios.

4. What is 15% of 300?

- A. 60
- B. 45**
- C. 50
- D. 30

To find 15% of 300, you first convert the percentage into a decimal by dividing 15 by 100, which gives you 0.15. Then, you multiply this decimal by 300. Here's how the calculation goes: $0.15 \times 300 = 45$. Thus, 15% of 300 is equal to 45. This means that among the possible answers, 45 is the correct answer. The other values do not correctly represent 15% of 300 based on the calculations performed. For instance, if you were to select 60, it would imply a higher percentage than 15%. Similarly, both 50 and 30 represent incorrect calculations of the percentage of the original value.

5. What is 15% of 200?

- A. 25
- B. 30**
- C. 35
- D. 40

To find 15% of 200, you can use the formula for calculating the percentage of a number, which is: $\text{Percentage} \times \text{Whole} = \text{Part}$. In this case, the percentage is 15%, and the whole is 200. First, convert 15% to a decimal by dividing by 100: $15\% = 15/100 = 0.15$. Next, multiply this decimal by the whole number: $0.15 \times 200 = 30$. Thus, 15% of 200 is 30, which confirms that the answer you selected is indeed correct.

6. How many ounces are in one pound?

- A. 8 ounces
- B. 12 ounces
- C. 16 ounces**
- D. 20 ounces

One pound is equal to 16 ounces. This conversion is a standard measurement in the imperial system. When considering weight, it's important to remember that ounces and pounds are both used to measure mass, with the pound being a larger unit compared to the ounce. Therefore, this conversion is crucial for tasks that require precise measurement of weight, such as cooking instructions, dietary guidelines, and various industrial applications. Recognizing this ratio allows for accurate and practical use of these measurements in everyday situations, reinforcing the understanding of unit conversions within the imperial system.

7. If you have 8 cups, how many pints do you have?

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

To determine how many pints are equivalent to 8 cups, we need to know the conversion between cups and pints. One pint is equivalent to 2 cups. To convert cups to pints, you can use the following formula: $\text{Number of pints} = \text{Number of cups} \div 2$. Using this formula for 8 cups: $\text{Number of pints} = 8 \text{ cups} \div 2 = 4 \text{ pints}$. This calculation reveals that 8 cups is equal to 4 pints, confirming that the correct answer is indeed 4 pints. Understanding this relationship between cups and pints is crucial for accurately converting measurements in cooking, baking, or any situation where fluid measurements are necessary.

8. What is the formula for finding the mean of a data set?

- A. $\text{Mean} = (\text{Max value}) / (\text{Number of values})$
- B. $\text{Mean} = (\text{Sum of all values}) / (\text{Number of values})$**
- C. $\text{Mean} = (\text{Min value}) + (\text{Max value})$
- D. $\text{Mean} = (\text{Total count of values}) / (\text{Sum of values})$

The mean of a data set is calculated by adding together all the values in the set and then dividing that sum by the total number of values. This formula provides the average value, which gives a central point around which the data is distributed. To break it down, when you sum all the values, you account for every piece of data in your set. Dividing this sum by the number of values ensures that the mean reflects the average size of the data points, taking into account how many data points there are. This method effectively balances the influence of larger and smaller values, giving a holistic view of the data set. The other choices do not represent the calculation of the mean correctly. The maximum and minimum values only give you the range and do not address the average of the data set. Counting values or summing without the proper context does not yield the mean as required. Thus, the formula for the mean is accurately expressed as the sum of all values divided by the total number of values.

9. What is the slope formula used in coordinate geometry?

- A. $(y_2 - y_1)/(x_2 - x_1)$**
- B. $(y_1 + y_2)/(x_1 + x_2)$
- C. $(y_2 + y_1)/(x_2 - x_1)$
- D. $(y_2 - y_1)/(x_1 + x_2)$

The slope formula in coordinate geometry is expressed as the change in the y-values divided by the change in the x-values between two distinct points on a line. Mathematically, this is represented as $(y_2 - y_1) / (x_2 - x_1)$. This formula effectively calculates how steep a line is and the direction it takes by comparing the vertical change (the difference in the y-coordinates) to the horizontal change (the difference in the x-coordinates) between two points, noted as (x_1, y_1) and (x_2, y_2) . A positive result indicates a line that rises from left to right, while a negative result indicates a line that falls from left to right. Thus, the correct answer utilizes the appropriate variables for determining the change in position along both axes, making it fundamental for analyzing linear relationships in a Cartesian plane.

10. What is the term for a number that can be expressed as a fraction of two integers?

- A. Real Number
- B. Rational Number**
- C. Whole Number
- D. Complex Number

The term for a number that can be expressed as a fraction of two integers is a rational number. By definition, a rational number is any number that can be written in the form $\frac{a}{b}$, where a and b are integers, and b is not zero. This encompasses integers and fractions, as integers can be represented as fractions by placing them over 1 (for example, 3 can be expressed as $\frac{3}{1}$). In contrast, real numbers include both rational and irrational numbers, but the question specifically asks for a subset of real numbers that meet the fraction criteria, which is why "real number" does not fit this requirement. Whole numbers are a subset of integers and do not cover all forms of fractional representation. Complex numbers include a real part and an imaginary part, which is not merely a fraction of integers, thus that option does not apply either. Therefore, rational numbers are the precise answer in this context, more accurately describing the relationship between integers in fraction form.

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://mathnasiumjobassmt.examzify.com>

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

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