HESI MATH PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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 15

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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.

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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!

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Questions

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1. What is the result of subtracting 7.5 from 15?

A. 5.5
B. 6.5
C. 7.5
D. 8.5

2. What is the equivalent of 100 centimeters in meters?

A. 0.5 meters
B. 1 meter
C. 1.5 meters
D. 2 meters

3. When converting Celsius to Fahrenheit, which step involves subtracting?

A. Subtraction comes first
B. Subtraction comes last
C. There is no subtraction involved
D. Subtraction happens after addition

4. What is the equivalent of 1 ounce in milliliters?

A. 20 milliliters
B. 30 milliliters
C. 40 milliliters
D. 50 milliliters

5. What is a 'terminating decimal'?

A. A decimal that is repeating
B. A decimal that is not continuous
C. A decimal that is infinite
D. A decimal that only has whole numbers

6. When converting Fahrenheit to Celsius, which equation is correct?

A. (Fahrenheit - 32) / 1.8
B. (Celsius × 1.8) + 32
C. (Fahrenheit × 1.8) + 32
D. (Celsius ÷ 1.8) + 32

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7. What is the product of 8 and 9?

A. 56

B. 64

C. 72

D. 81

8. Find the area of a circle with a diameter of 10 inches.

A. 25π in^2

B. 50π in^2

C. 78.54 in^2

D. 100π in^2

9. How many millimeters are in one centimeter?

A. 5 millimeters

B. 10 millimeters

C. 15 millimeters

D. 20 millimeters

10. If a recipe calls for 3 liters of water, how many milliliters is that?

A. 300 mL

B. 3000 mL

C. 30,000 mL

D. 3,000 mL

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Answers

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

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Explanations

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1. What is the result of subtracting 7.5 from 15?

A. 5.5

B. 6.5

C. 7.5

D. 8.5

To find the result of subtracting 7.5 from 15, you perform the calculation as follows: 15 - 7.5 equals 7.5. This means that after taking away 7.5 from 15, you are left with 7.5. This value represents the difference between the two numbers, showing how much remains after the subtraction. Therefore, the correct result of the subtraction is 7.5.

2. What is the equivalent of 100 centimeters in meters?

A. 0.5 meters

B. 1 meter

C. 1.5 meters

D. 2 meters

To determine the equivalent of 100 centimeters in meters, it is essential to understand the relationship between these two units of measurement. There are 100 centimeters in 1 meter. This means that to convert from centimeters to meters, you divide the number of centimeters by 100. In this case, performing the conversion is straightforward: 100 centimeters divided by 100 equals 1 meter. Thus, the equivalent of 100 centimeters is accurately represented as 1 meter. This understanding underpins the correct answer, which reflects a fundamental conversion between metric units. The other choices represent incorrect conversions based on this established metric relationship.

3. When converting Celsius to Fahrenheit, which step involves subtracting?

A. Subtraction comes first

B. Subtraction comes last

C. There is no subtraction involved

D. Subtraction happens after addition

When converting Celsius to Fahrenheit, the formula used is $F = \frac{9}{5}C + 32$. In this formula, the conversion process involves first multiplying the Celsius temperature by $\frac{9}{5}$ and then adding 32 to the result. This means that subtraction does not take place during the initial steps of the conversion. The confusion may arise because some might think of rearranging or transforming the equation, but in standard practice of conversion from Celsius to Fahrenheit, there isn't a step where subtraction is involved directly. The addition of 32 is the final step, which ensures the correct adjustment from the Celsius to Fahrenheit scale. Thus, saying that subtraction comes last aligns with the correct understanding of the conversion method, as it emphasizes that there is no role for subtraction in the process itself. This is why the answer indicates that subtraction does not come into play when converting from Celsius to Fahrenheit.

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4. What is the equivalent of 1 ounce in milliliters?

A. 20 milliliters

B. 30 milliliters

C. 40 milliliters

D. 50 milliliters

To determine the equivalent of 1 ounce in milliliters, it's important to know the conversion factor used between these two units. Specifically, 1 ounce is commonly accepted as being equal to approximately 29.57 milliliters. When rounding this value, it is often simplified to about 30 milliliters for practical purposes, which aligns with the conversion most frequently used in cooking and general references. Therefore, the most accurate and commonly used approximation for 1 ounce is 30 milliliters, making this option the correct answer. This conversion is particularly useful in various fields such as cooking, nutrition, and medicine, where precise measurements are important. Thus, understanding that there are about 30 milliliters in an ounce can help in accurately converting recipes or medication dosages.

5. What is a 'terminating decimal'?

A. A decimal that is repeating

B. A decimal that is not continuous

C. A decimal that is infinite

D. A decimal that only has whole numbers

A terminating decimal is a decimal that has a finite number of digits after the decimal point, meaning it does not continue infinitely. This type of decimal representation stops after a certain number of decimal places. For example, the decimal 0.75 is a terminating decimal because it has two digits after the decimal point. Option B, suggesting that a terminating decimal is "not continuous," may imply the correct understanding of the concept, as a terminating decimal indeed does not extend infinitely. However, it might be misleading as the term "continuous" is generally used in a different mathematical context. A more straightforward definition would directly state that a terminating decimal has a finite number of digits. In contrast, the other options describe characteristics that do not align with the definition of a terminating decimal. A repeating decimal continues with a certain pattern indefinitely, while an infinite decimal has no end and continues forever. Lastly, the presence of whole numbers in Option D does not characterize decimals, as terminating decimals can include fractions that are expressed in decimal form, irrespective of whole numbers.

6. When converting Fahrenheit to Celsius, which equation is correct?

A. (Fahrenheit - 32) / 1.8

B. (Celsius × 1.8) + 32

C. (Fahrenheit × 1.8) + 32

D. (Celsius ÷ 1.8) + 32

The conversion from Fahrenheit to Celsius utilizes the formula where you subtract 32 from the Fahrenheit temperature and then divide the result by 1.8. Therefore, the correct equation for converting Fahrenheit to Celsius is represented in the first option. To clarify how the process works: you start with a Fahrenheit temperature, subtract 32 to account for the difference between the two temperature scales, and then divide by 1.8 to convert to Celsius. For instance, if you have 68 degrees Fahrenheit, you would perform the calculation as follows: 1. Subtract 32: 68 - 32 = 36 2. Divide by 1.8: 36 / 1.8 = 20 degrees Celsius. The other formulas provided relate to converting Celsius to Fahrenheit or incorrectly state the operations required for the conversion. One might mistakenly choose a different formula if they are interpreting the direction of conversion or missing the specific mathematical operations necessary in the conversion process.

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7. What is the product of 8 and 9?

A. 56

B. 64

C. 72

D. 81

To find the product of 8 and 9, you multiply the two numbers together: $8 \times 9 = 72$. This calculation shows that the result is achieved by either repeated addition or direct multiplication. Since 8 is added to itself nine times, or conversely 9 added to itself eight times, the total comes to 72. In terms of the context and significance of the selected answer, 72 is frequently encountered in daily life through various formulas, measurements, and when dealing with large quantities, making it a practical number to be familiar with. Understanding multiplication as a fundamental arithmetic operation assists in grasping more complex mathematical concepts later on.

8. Find the area of a circle with a diameter of 10 inches.

A. 25π in²

B. 50π in²

C. 78.54 in²

D. 100π in²

To find the area of a circle, the formula used is $A = \pi r^2$, where A represents the area and r is the radius of the circle. Given that the diameter of the circle is 10 inches, we first need to determine the radius, which is half of the diameter. Calculating the radius: Radius = Diameter/2 = 10 inches / 2 = 5 inches. Now substituting the radius back into the area formula: $A = \pi(5 \text{ inches})^2 = \pi(25 \text{ in}^2) = 25\pi \text{ in}^2$. This shows that the area of the circle is indeed 25π square inches. Thus, the option stating 25π in² accurately represents the area of the circle based on the provided diameter.

9. How many millimeters are in one centimeter?

A. 5 millimeters

B. 10 millimeters

C. 15 millimeters

D. 20 millimeters

In the metric system, the relationship between centimeters and millimeters is straightforward. One centimeter is defined as being equal to 10 millimeters. This is because the metric system is based on powers of ten, making conversions between units simple. If you visualize a ruler, you can see that each centimeter mark is divided into ten smaller segments, with each segment representing one millimeter. Therefore, when you convert 1 centimeter to millimeters, you multiply by 10, confirming that 1 centimeter is exactly 10 millimeters. This conversion is often used in scientific and technical contexts, as precision in measurements is crucial, and understanding these basic metric conversions is fundamental in many fields, including healthcare and engineering.

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10. If a recipe calls for 3 liters of water, how many milliliters is that?

A. 300 mL

B. 3000 mL

C. 30,000 mL

D. 3,000 mL

To convert liters to milliliters, it's essential to know the relationship between these two units. One liter is equivalent to 1,000 milliliters. Therefore, to convert 3 liters into milliliters, you multiply the number of liters by 1,000. Calculating this gives: 3 liters × 1,000 milliliters/liter = 3,000 milliliters. This amount corresponds to the choice that indicates 3,000 mL, which is 3 liters expressed in smaller units. Understanding the conversion factor of 1,000 is key in making these types of calculations, ensuring you can accurately convert between units of volume as required in various contexts, such as cooking or measuring liquids in scientific settings.

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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://hesimath.examzify.com

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

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