

HOSA Medical Math Assessment Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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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.

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 many teaspoons are in 5 milliliters?
 - A. 1 teaspoon
 - B. 2 teaspoons
 - C. 3 teaspoons
 - D. 4 teaspoons

2. What is the standard conversion from milliliters to liters?
 - A. 1 L = 10 mL
 - B. 1 L = 100 mL
 - C. 1 L = 1000 mL
 - D. 1 L = 0.1 mL

3. What is the concentration in units/mL of a drug in a vial containing 1,000,000 units per 10 mL?
 - A. 50,000 units/mL
 - B. 100,000 units/mL
 - C. 150,000 units/mL
 - D. 200,000 units/mL

4. How many centimeters are in 10 millimeters?
 - A. 0.1 cm
 - B. 1 cm
 - C. 10 cm
 - D. 100 cm

5. Which equation converts Celsius to Fahrenheit?
 - A. $F = (C) + 32$
 - B. $F = (C)9/5 + 32$
 - C. $F = (C-32)5/9$
 - D. $F = 32 - (C \times 5/9)$

6. Convert 500 grams to ounces.
- A. 15.87 ounces
 - B. 17.64 ounces
 - C. 19.05 ounces
 - D. 20.57 ounces
7. Convert 15% solution to decimal form.
- A. 0.01
 - B. 0.15
 - C. 0.25
 - D. 1.5
8. What is the conversion factor between ounces and grams?
- A. 1 ounce = 28.35 grams
 - B. 1 ounce = 25 grams
 - C. 1 ounce = 30 grams
 - D. 1 ounce = 35 grams
9. Which of the following is equal to 1 meter?
- A. 50 centimeters
 - B. 100 centimeters
 - C. 200 centimeters
 - D. 1000 millimeters
10. How many micrograms are in 1 milligram?
- A. 500 micrograms
 - B. 1000 micrograms
 - C. 1500 micrograms
 - D. 2000 micrograms

Answers

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

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Explanations

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1. How many teaspoons are in 5 milliliters?

- A. 1 teaspoon
- B. 2 teaspoons
- C. 3 teaspoons
- D. 4 teaspoons

To determine how many teaspoons are in 5 milliliters, it is essential to know the conversion factor between these two units of measurement. 1 teaspoon is equivalent to approximately 5 milliliters. Therefore, when you have 5 milliliters, it directly converts to 1 teaspoon. This conversion is based on standard measurement relationships in cooking and medicine, where precise dosing and ingredient measurement are critical. Understanding this relationship is particularly important in clinical settings, where accurate dosages can impact patient care. In this case, knowing that 1 teaspoon equals 5 milliliters allows for straightforward conversions between volume measurements, which is a common necessity in healthcare for administering liquid medications or nutritional supplements. Thus, the answer that indicates there is 1 teaspoon in 5 milliliters is correct.

2. What is the standard conversion from milliliters to liters?

- A. 1 L = 10 mL
- B. 1 L = 100 mL
- C. 1 L = 1000 mL
- D. 1 L = 0.1 mL

The standard conversion from milliliters to liters is based on the metric system, where the liter is the larger unit. One liter is equivalent to 1000 milliliters. This relationship is crucial in medical practice, as medication dosages and fluid measurements often require accurate conversions between these units to ensure patient safety and correct administration of treatments. Understanding that 1000 milliliters make up a single liter allows healthcare professionals to easily convert between these measurements when calculating doses or managing intravenous fluids. This conversion helps ensure clarity and precision in medical documentation and communication.

3. What is the concentration in units/mL of a drug in a vial containing 1,000,000 units per 10 mL?

- A. 50,000 units/mL
- B. 100,000 units/mL
- C. 150,000 units/mL
- D. 200,000 units/mL

To determine the concentration of the drug in the vial, you need to divide the total number of units of the drug by the total volume in milliliters. In this case, there are 1,000,000 units of the drug in a total volume of 10 mL. To find out how many units are present in each milliliter, you perform the following calculation: $1,000,000 \text{ units} \div 10 \text{ mL} = 100,000 \text{ units/mL}$. This calculation shows that for every milliliter of the solution in the vial, there are 100,000 units of the drug present. Therefore, the concentration of the drug is 100,000 units/mL. This reasoning highlights that the right answer reflects the accurate calculation of concentration based on the total units and volume provided.

4. How many centimeters are in 10 millimeters?

- A. 0.1 cm
- B. 1 cm
- C. 10 cm
- D. 100 cm

To convert millimeters to centimeters, it's important to know the relationship between the two units. There are 10 millimeters in 1 centimeter. Given the question about how many centimeters are in 10 millimeters, the calculation involves dividing the number of millimeters by the number of millimeters per centimeter: $10 \text{ mm} \div 10 \text{ mm/cm} = 1 \text{ cm}$. This shows that 10 millimeters is equal to 1 centimeter. Thus, the correct answer is indeed 1 cm.

Understanding this unit conversion helps in various scenarios within the medical field, especially when measuring and converting different types of data. Being familiar with metric conversions is essential for accurate measurements in healthcare settings.

5. Which equation converts Celsius to Fahrenheit?

- A. $F = (C) + 32$
- B. $F = (C)9/5 + 32$
- C. $F = (C-32)5/9$
- D. $F = 32 - (C \times 5/9)$

The correct equation for converting Celsius to Fahrenheit is represented by the formula $F = (C \times 9/5) + 32$. This equation works by first taking the Celsius temperature, multiplying it by 9/5 (which is the same as 1.8), and then adding 32 to the result. This transformation is necessary because the two temperature scales have different starting points and increments per unit. Using this formula allows for a proper conversion that accounts for both the scaling of the temperature difference between the two scales and the offset due to their different zero points. The 9/5 factor adjusts the difference in the degree increments, while the addition of 32 shifts the starting point from the Celsius zero degree mark to the corresponding Fahrenheit equivalent. Other equations listed do not perform this correct conversion. For instance, some suggest different operations that either do not maintain the necessary mathematical relationship between the two scales or misapply the constants involved. Understanding this conversion formula is essential for anyone involved in fields where temperature readings need to be accurately transformed between these two systems.

6. Convert 500 grams to ounces.

- A. 15.87 ounces
- B. 17.64 ounces
- C. 19.05 ounces
- D. 20.57 ounces

To convert grams to ounces, it's essential to use the correct conversion factor. One ounce is equivalent to approximately 28.35 grams. To perform the conversion from grams to ounces, you would divide the number of grams by the number of grams per ounce. In this case, you would calculate: $500 \text{ grams} \div 28.35 \text{ grams/ounce} \approx 17.64 \text{ ounces}$. This calculation accurately reflects the conversion from grams to ounces, resulting in approximately 17.64 ounces as the correct answer. The proper application of the conversion factor is crucial for achieving the right result, which is why this specific choice is valid and correct for the conversion.

7. Convert 15% solution to decimal form.

- A. 0.01
- B. 0.15**
- C. 0.25
- D. 1.5

To convert a percentage to decimal form, you divide the percentage value by 100. In this case, to convert 15% to a decimal, you perform the calculation: $15 \div 100 = 0.15$. This shows that 15% expressed as a decimal is 0.15. Understanding this conversion is foundational in various medical calculations, such as determining dosages or concentrations. Percentages represent parts per hundred, so converting them to decimals allows for easier mathematical manipulation in formulas and calculations where decimals are required. Using the correct decimal form ensures accuracy in measurements, which is crucial in a medical setting.

8. What is the conversion factor between ounces and grams?

- A. 1 ounce = 28.35 grams**
- B. 1 ounce = 25 grams
- C. 1 ounce = 30 grams
- D. 1 ounce = 35 grams

The conversion factor between ounces and grams is a critical piece of information that ensures accurate measurement, especially in fields like medicine and culinary arts. One ounce is equivalent to 28.35 grams. This relationship is based on the metric system's definition of various weight measurements and is widely recognized and used in both scientific and everyday contexts. When using this conversion factor, it allows practitioners and students to accurately convert measurements from the imperial system (ounces) to the metric system (grams), which is crucial for tasks like medication dosing and nutritional analysis where precision is key. The other figures provided in the options do not represent the correct weight equivalence of an ounce and therefore do not reflect accepted measurement standards. Thus, the correct answer is firmly supported by established conversion standards.

9. Which of the following is equal to 1 meter?

- A. 50 centimeters
- B. 100 centimeters**
- C. 200 centimeters
- D. 1000 millimeters

The correct choice, which corresponds to 1 meter, is 100 centimeters. This is based on the metric system, where the meter is the base unit of length. Since 1 meter is defined as being equal to 100 centimeters, this directly confirms the accuracy of the answer. To further solidify this understanding, it's important to consider the relationships and conversions within the metric system. One meter is also equal to 1000 millimeters. Therefore, while both 100 centimeters and 1000 millimeters are valid conversions from 1 meter, the choice of 100 centimeters is the most straightforward representation of that metric equivalency. This context is beneficial as it helps clarify how measurements in the metric system are systematically scaled based on powers of ten, making conversions relatively intuitive once the basic units are understood.

10. How many micrograms are in 1 milligram?

- A. 500 micrograms
- B. 1000 micrograms
- C. 1500 micrograms
- D. 2000 micrograms

One milligram is equal to 1,000 micrograms. This relationship is based on the metric system, where the prefix 'micro-' denotes one millionth of a unit. Therefore, when converting milligrams to micrograms, it's essential to remember that there are 1,000 micrograms in just 1 milligram. Understanding this conversion is crucial in fields such as medicine and pharmacology, where precise measurements are essential for dosing medications. Recognizing that one unit of the metric system can equal a larger quantity of a smaller unit exemplifies the hierarchical nature of measurement in the metric system. This foundational knowledge is particularly important in medical contexts, where accurate dosing can directly impact patient safety and treatment efficacy.

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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://hosamedicalmath.examzify.com>

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

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