

HOSA MEDICAL MATH ASSESSMENT PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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. What is the formula for Fried's Rule for infant dosing?

- A. $(\text{age in months}/150) \times \text{adult dose}$
- B. $(\text{age in years}/100) \times \text{adult dose}$
- C. $(\text{weight in lbs}/200) \times \text{adult dose}$
- D. $(\text{age in years}/150) \times \text{adult dose}$

2. What is 7.5% of 200?

- A. 10
- B. 15
- C. 20
- D. 25

3. Why is Young's Rule significant in pediatric dosing?

- A. It considers the child's age in years for dosage
- B. It considers the child's weight in pounds for dosage
- C. It limits maximum dose based on organ function
- D. It provides a flat rate for all children

4. How many tablespoons are in 1 cup?

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

5. What does 'tbsp' stand for?

- A. Teaspoon
- B. Quart
- C. Tablespoon
- D. Foot/Feet

6. How would you express 10,000 micrograms in milligrams?

- A. 1 mg
- B. 5 mg
- C. 10 mg
- D. 100 mg

7. How many centimeters are in 1 meter?

- A. 10 cm
- B. 50 cm
- C. 100 cm
- D. 1000 cm

8. How many milliliters are in a fluid ounce?

- A. 20 milliliters
- B. 30 milliliters
- C. 28.35 milliliters
- D. 25 milliliters

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

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

10. How do you calculate the dosage in mg if you have a solution of 5 mg per ml and you need 10 ml?

- A. 20 mg
- B. 30 mg
- C. 40 mg
- D. 50 mg

Answers

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

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Explanations

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1. What is the formula for Fried's Rule for infant dosing?

- A. (age in months/150) x adult dose
- B. (age in years/100) x adult dose
- C. (weight in lbs/200) x adult dose
- D. (age in years/150) x adult dose

Fried's Rule is a formula used to calculate the appropriate medication dose for infants based on their age. The formula specifically states that the infant's age in months is divided by 150 and then multiplied by the adult dose to yield the safe dosage for the infant. Using this formula, the calculation becomes straightforward: if an infant is, for instance, 12 months old, you would calculate $\left(\frac{12}{150}\right)$ and multiply the result by the adult dose to determine the appropriate amount for the child. This method recognizes that infants generally require a smaller dose compared to adults, making it a practical and essential approach for pediatric medication management. The other options provided do not accurately represent Fried's Rule. In particular, using years instead of months would lead to inappropriate dosage calculations, as the pediatric population's dose should be adjusted based on the more precise month-based age measurement.

2. What is 7.5% of 200?

- A. 10
- B. 15
- C. 20
- D. 25

To find 7.5% of 200, you can convert the percentage into a decimal and then multiply it by the total amount. First, convert 7.5% into a decimal. This is done by dividing 7.5 by 100, which equals 0.075. Then, multiply this decimal by 200: $0.075 \times 200 = 15$. Therefore, 7.5% of 200 is 15. This calculation shows how to derive a percentage from a whole number, which is a fundamental concept in medical math, especially when calculating dosages or interpreting data. Understanding this calculation helps in various medical scenarios, such as when determining medication dosages based on a patient's weight or converting measurement units.

3. Why is Young's Rule significant in pediatric dosing?

- A. It considers the child's age in years for dosage
- B. It considers the child's weight in pounds for dosage
- C. It limits maximum dose based on organ function
- D. It provides a flat rate for all children

Young's Rule is significant in pediatric dosing because it takes into account the child's age in years to determine the appropriate dosage of medication. This is particularly important in pediatrics, as children's bodies metabolize and respond to medications differently compared to adults. By using the child's age, Young's Rule helps to provide a more accurate dosage that aims to ensure efficacy while minimizing the risk of toxicity or adverse effects. The utilization of age as a factor allows healthcare providers to make informed decisions based on developmental stages, which is vital in administering safe and effective treatment to younger patients. This method is especially helpful in cases where weight may not be the most reliable measure due to variations in growth patterns among children.

4. How many tablespoons are in 1 cup?

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

One cup is equal to 16 tablespoons. This conversion is based on standardized measurements commonly used in cooking and baking. The relationship is part of the customary system of measurement, where it is established that each cup comprises a specific number of tablespoons to ensure consistency in recipes and food preparation. Understanding this conversion is essential for accurately measuring ingredients, particularly when adjusting recipe sizes or when specific measuring tools are not available. Therefore, recognizing that there are 16 tablespoons in one cup allows for precise calculations and ensures successful outcomes in culinary tasks.

5. What does 'tbsp' stand for?

- A. Teaspoon
- B. Quart
- C. Tablespoon**
- D. Foot/Feet

The abbreviation 'tbsp' stands for "tablespoon." This is a commonly used measurement in cooking and pharmacology, especially when it comes to dosing liquid medications or preparing food. A tablespoon is larger than a teaspoon, another common measurement, which is abbreviated as 'tsp.' In culinary contexts, one tablespoon is typically equivalent to three teaspoons or about 15 milliliters. Understanding this abbreviation is crucial for accurately measuring ingredients or administering medication, as it helps ensure proper dosages or quantities are used, which can have a significant impact on outcomes in both cooking and healthcare practices.

6. How would you express 10,000 micrograms in milligrams?

- A. 1 mg
- B. 5 mg
- C. 10 mg**
- D. 100 mg

To convert micrograms to milligrams, it is essential to understand the relationship between these two units of measurement. There are 1,000 micrograms in a milligram. Therefore, to convert micrograms to milligrams, you divide the number of micrograms by 1,000. In this case, you have 10,000 micrograms. When you divide 10,000 by 1,000, the result is 10 milligrams. This means that 10,000 micrograms is equivalent to 10 milligrams. This conversion is fundamental in medical math, as precise dosing often relies on accurately converting between metric units. Understanding these conversions ensures that healthcare professionals can provide the correct amounts of medication and nutrients to patients safely.

7. How many centimeters are in 1 meter?

- A. 10 cm
- B. 50 cm
- C. 100 cm**
- D. 1000 cm

In the metric system, the relationship between meters and centimeters is defined by the fact that one meter is equal to 100 centimeters. This conversion stems from the metric prefix "centi-", which means one hundredth. Thus, when you convert 1 meter to centimeters, you multiply the number of meters (1) by 100, resulting in 100 centimeters. This standard measurement makes it easy to convert between different metric units based on powers of ten, ensuring consistency and simplicity in calculations. The correct understanding of these relationships is essential for various applications in healthcare and medical math, where precise measurements are often required.

8. How many milliliters are in a fluid ounce?

- A. 20 milliliters
- B. 30 milliliters
- C. 28.35 milliliters**
- D. 25 milliliters

A fluid ounce is a unit of volume commonly used in the United States and is equivalent to approximately 28.35 milliliters. This conversion is crucial in medical settings, where precise measurements are necessary for medication dosing, nutrition, and other applications. Understanding this equivalence aids healthcare professionals in ensuring accurate communication about volumes, particularly when switching between metric and imperial systems. The value of 28.35 milliliters is derived from the conversion factors used in measuring fluid volumes. In practice, rounding to 30 milliliters is often acceptable for general use, but precise calculations are essential in medical contexts to avoid dosing errors. Utilizing the exact figure of 28.35 milliliters ensures that the measurements align with pharmaceutical standards and best practices. This knowledge is fundamental for anyone involved in administering medications or preparing solutions that require exact volumes.

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 do you calculate the dosage in mg if you have a solution of 5 mg per ml and you need 10 ml?

- A. 20 mg
- B. 30 mg
- C. 40 mg
- D. 50 mg**

To determine the total dosage in milligrams, you multiply the concentration of the solution by the volume you need to administer. In this case, the concentration is 5 mg per milliliter (ml) and the required volume is 10 ml. The calculation is performed as follows: 1. Start with the concentration: 5 mg/ml. 2. Multiply that by the desired volume: 10 ml. So, the calculation would be: $5 \text{ mg/ml} \times 10 \text{ ml} = 50 \text{ mg}$. Thus, the total dosage required is 50 mg, which corresponds with the answer selected. This method of calculation is essential in healthcare settings to ensure that patients receive the proper dosage of medication based on concentration and volume.

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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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