# TEAS Nursing Entrance Practice Exam (Sample)

## Study Guide


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# Questions

**1. What represents the hypotenuse in the Pythagorean theorem?**

**A. The longest side**

**B. The shortest side**

**C. The perimeter side**

**D. The area length**

**2. What does "aural" signify in the context of balance and postural control?**

**A. Eyes**

**B. Ears**

**C. Nose**

**D. Hands**

**3. What should be assumed when letters or numbers are written together without any sign or symbol between them?**

**A. They represent addition**

**B. They represent subtraction**

**C. They represent multiplication**

**D. They represent division**

**4. What percentage does the fraction 1/20 represent?**

**A. 2%**

**B. 5%**

**C. 10%**

**D. 25%**

**5. Which of the following statements is a key principle of cell theory?**

**A. All cells are identical in function**

**B. All cells arise from preexisting cells**

**C. Cells can only exist independently**

**D. Organisms are made entirely of non-living components**

**6. Which of the following describes how to convert a decimal to a fraction?**

- **A. The decimal becomes the numerator, and the denominator is based on the number of decimal places**
- **B. The decimal is multiplied by 100 to get the numerator, and 100 is the denominator**
- **C. The numerator is created by dropping the decimal point, and the denominator is always 10**
- **D. The decimal value is multiplied by the denominator to create the fraction**

**7. Which formula is used to calculate percent decrease?**

- **A. [(original value - new value) / original value] x 100**
- **B. [(new value - original value) / original value] x 100**
- **C. [(original value + new value) / original value] x 100**
- **D. [(new value + original value) / new value] x 100**

**8. What is the total number of inches in a yard?**

- **A. 24 inches**
- **B. 36 inches**
- **C. 30 inches**
- **D. 12 inches**

**9. The term "aural" is related to which of the following?**

- **A. Eyes**
- **B. Ears**
- **C. Nose**
- **D. Hands**

**10. What do adjectives do in a sentence?**

- **A. They describe or modify nouns**
- **B. They replace nouns**
- **C. They indicate actions**
- **D. They modify verbs**

# Answers

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

# Explanations

## 1. What represents the hypotenuse in the Pythagorean theorem?

**A. The longest side**

**B. The shortest side**

**C. The perimeter side**

**D. The area length**

**The hypotenuse in the Pythagorean theorem is represented by the longest side of a right triangle. The theorem itself states that in a right triangle, the square of the length of the hypotenuse (the side opposite the right angle) is equal to the sum of the squares of the lengths of the other two sides. This relationship highlights that the hypotenuse is always the longest side in a right triangle configuration. Understanding the role of the hypotenuse is crucial for solving problems related to right triangles, as it allows for finding distances and angles using various mathematical approaches. The other options do not accurately define the hypotenuse: the shortest side refers to one of the legs of the triangle, the perimeter relates to the total distance around the triangle, and area length does not have a direct relationship with any specific side in this context. Thus, the correct answer emphasizes the unique position and characteristic of the hypotenuse in relation to the other sides in a right triangle.**

## 2. What does "aural" signify in the context of balance and postural control?

**A. Eyes**

**B. Ears**

**C. Nose**

**D. Hands**

**In the context of balance and postural control, "aural" refers to the ears. This term is derived from the Latin word "auris," which means ear. The ears play a crucial role in maintaining balance and coordination through the vestibular system, which is located in the inner ear. This system includes structures that respond to head movement and changes in position, allowing the body to maintain its equilibrium. When the head moves, specialized cells in the vestibular system send signals to the brain about the position of the head in relation to gravity. This information is integrated with visual and proprioceptive inputs to help the body maintain balance and posture. Therefore, understanding the significance of "aural" in this context directly relates to the function of the ears in balance and postural control.**

## 3. What should be assumed when letters or numbers are written together without any sign or symbol between them?

**A. They represent addition**

**B. They represent subtraction**

**C. They represent multiplication**

**D. They represent division**

**When letters or numbers are written together without any sign or symbol between them, it is generally assumed that they represent multiplication. This convention is particularly common in algebra and mathematics, where the juxtaposition of variables or numbers implies that they are to be multiplied. For example, in the expression \(xy\), it is understood that \(x\) is multiplied by \(y\). This notational system helps streamline communication, allowing mathematicians to convey complex expressions without cluttering them with symbols. Multiplication is the assumed operation due to this convention, especially in contexts where it is clear that no other operation is intended.**

## 4. What percentage does the fraction 1/20 represent?

**A. 2%**

**B. 5%**

**C. 10%**

**D. 25%**

**To determine the percentage that the fraction 1/20 represents, you can start by converting the fraction into a decimal by dividing the numerator (1) by the denominator (20). 1 divided by 20 equals 0.05. Next, to convert a decimal to a percentage, you multiply it by 100. So, 0.05 multiplied by 100 equals 5%. This means that 1/20 is equivalent to 5% when expressed in percentage terms. Understanding this conversion is critical, as percentages are often used to express proportions in various contexts, including nursing and healthcare, where understanding ratios can affect patient care and communication.**

## 5. Which of the following statements is a key principle of cell theory?

**A. All cells are identical in function**

**B. All cells arise from preexisting cells**

**C. Cells can only exist independently**

**D. Organisms are made entirely of non-living components**

**The statement that all cells arise from preexisting cells is a fundamental principle of cell theory. This principle emphasizes that new cells are produced only through the division of existing cells, which underlines the continuity of life. It reflects the understanding that cell division is a crucial process for growth, repair, and reproduction in living organisms. This concept is significant as it helps to establish a connection between all forms of life, illustrating that all cellular organisms derive from earlier cellular forms. This principle also supports various biological processes such as development, healing, and propagation of genetic material through cell division. In contrast, the other statements do not align with the key tenets of cell theory. For instance, while some cells may perform similar functions, the assertion that all cells are identical in function is inaccurate as different types of cells have specialized roles. The idea that cells can only exist independently overlooks the fact that many cells function as part of tissues and organs within multicellular organisms. Lastly, the claim that organisms are made entirely of non-living components contradicts the essence of living organisms, which are composed of living cells and cellular structures.**

## 6. Which of the following describes how to convert a decimal to a fraction?

**A. The decimal becomes the numerator, and the denominator is based on the number of decimal places**

**B. The decimal is multiplied by 100 to get the numerator, and 100 is the denominator**

**C. The numerator is created by dropping the decimal point, and the denominator is always 10**

**D. The decimal value is multiplied by the denominator to create the fraction**

**To convert a decimal to a fraction, the process involves taking the decimal value and treating it as the numerator of the fraction. The denominator is determined based on how many digits are present after the decimal point. For example, if a decimal has two digits after the decimal point, the denominator would be 100, because 100 corresponds to two decimal places (10 for each decimal place: 10, 100, etc.). This means that for the decimal 0.75, it can be represented as 75/100, where 75 is the numerator and 100 is the denominator due to the two decimal places. Reducing this fraction would yield 3/4, which is the simplest form. The other options provided do not accurately summarize the proper method for conversion. For instance, one option suggests multiplying the decimal by 100, which may be misleading as not all decimals will have two decimal places. Another option implies a consistent denominator of 10, which neglects the need to account for the number of decimal places accurately. Lastly, an option mentioning multiplying the decimal by the denominator could lead to confusion about the conversion process itself.**

## 7. Which formula is used to calculate percent decrease?

**A. [(original value - new value) / original value] x 100**

**B. [(new value - original value) / original value] x 100**

**C. [(original value + new value) / original value] x 100**

**D. [(new value + original value) / new value] x 100**

**To calculate percent decrease, the correct formula involves determining the difference between the original value and the new value, dividing that difference by the original value, and then multiplying by 100 to convert it into a percentage. This approach accurately captures the extent of the decrease relative to the original value. The formula begins with taking the original value and subtracting the new value to find the actual decrease in value. By dividing this decrease by the original value, you can understand how significant the decrease is in relation to where you started. Multiplying by 100 allows you to express this ratio as a percentage, making it easier to interpret. Using this method provides a clear and accurate representation of the decrease, which is crucial for various applications, such as in finance, sales reporting, or any scenario where understanding changes in value is important.**

## 8. What is the total number of inches in a yard?

**A. 24 inches**

**B. 36 inches**

**C. 30 inches**

**D. 12 inches**

**The total number of inches in a yard is 36 inches, which is the correct response. This conversion is based on the established measurement system where one yard is equivalent to three feet, and each foot contains 12 inches. By multiplying the number of feet in a yard by the number of inches in a foot (3 feet x 12 inches/foot), you arrive at a total of 36 inches in one yard. Understanding this measurement is essential in both practical applications, such as sewing or carpentry, and in academic settings where precise measurements are necessary.**

## 9. The term "aural" is related to which of the following?

**A. Eyes**

**B. Ears**

**C. Nose**

**D. Hands**

**The term "aural" specifically pertains to the ears and hearing. It derives from the Latin word "auris," which means "ear." In medical and anatomical contexts, aural typically describes anything that involves the ear, such as aural health, aural skills in music, or aural examinations conducted by audiologists. Understanding this terminology is essential in healthcare and nursing, as it directly relates to auditory pathways and ear-related conditions, emphasizing the importance of sound and hearing in patient assessments.**

## 10. What do adjectives do in a sentence?

**A. They describe or modify nouns**

**B. They replace nouns**

**C. They indicate actions**

**D. They modify verbs**

**Adjectives play a crucial role in a sentence by describing or modifying nouns. This means that they provide additional information about a noun, such as its qualities, quantities, or characteristics. For example, in the phrase “the red apple,” the adjective “red” describes the noun “apple,” giving the reader a clearer picture of what is being referred to. Adjectives enhance meaning by allowing writers to express details that can evoke images, feelings, or deeper understanding in the audience. This descriptive function is what makes adjectives essential in both oral and written communication. Through adjectives, a writer can convey specific characteristics, helping to paint a more vivid picture or to differentiate between similar nouns. The other functions mentioned, such as replacing nouns, indicating actions, or modifying verbs, belong to different parts of speech. Pronouns replace nouns, verbs indicate actions, and adverbs modify verbs—highlighting how adjectives have a unique and distinct function of enhancing nouns.**