Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Identify the instructional domain for the following lesson excerpt: The teacher has completed the demonstration, and several guided practice problems have been completed. Now, the teacher wants to see what students can do without teacher prompts or support. Each student has a set of cups (to represent groups) and marbles (to represent objects in groups). S/he has written a multiplication problem on the board (5 x 2 = ), and has directed students to represent the problem with the cups and marbles.
   a. conceptual understanding
   b. declarative knowledge
   c. procedural knowledge
   d. problem solving

2. The teacher moves from the review to the new lesson when
   a. all students have completed the review problems
   b. the time allotted for the review is complete
   c. the majority of students complete most problems accurately
   d. indicated by scope and sequence

3. Conceptual understanding frequently is taught using:
   a. flash card drills and instructional games
   b. the Peer Assisted Learning System
   c. the CRA instructional process
   d. 1-minute timings

4. Concrete level instruction involves the use of:
   a. manipulative devices (people or objects)
   b. numbers without objects or pictures
   c. pictures of objects or tally marks
   d. symbols

5. Representational level instruction of the C-R-A process involves the use of:
   a. manipulative devices (people or objects)
   b. numbers without objects or pictures
   c. symbols
6. Abstract level instruction involves the use of:
   a. manipulative devices (people or objects)
   b. pictures of objects
   c. numbers only
   d. tally marks

7. Ms. Jones writes “(a x b) x c = a x (b x c)” on the board. She is preparing to teach the:
   a. Commutative Property of Multiplication.
   b. Distributive Property of Multiplication over Addition.
   c. Associative Property of Multiplication.
   d. Reversal Property of Multiplication.

8. An algebraic function is:
   a. a special kind of relation in which two sets are related to each other in such a way that each element in the first set is related to exactly one element in the second set.
   b. an authentic context in which algebra is used.
   c. a special kind of relation in which two sets are totally unrelated and no consistent pattern exists between the sets.
   d. information put in graph and table formats as well as an algebraic sentence.

9. One-to-one correspondence between groups means:
   a. each object in the first group is matched with exactly one object in the second group.
   b. each object in the first group is matched with an identical object in the second group.
   c. each object in the first group is larger than each object in the second group.
   d. each object in the first group is smaller than each object in the second group.

10. Mr. Thomas asked his students to arrange the groups of cubes from smallest group to largest group on their desktops. He was teaching the concept of:
   a. one-to-one correspondence.
   b. pictures of objects or tally marks
   c. seriation.
b. conservation.  

d. place value.

11. Expanded notation involves:

a. writing number words and symbols in vertical formats.  
b. rounding numbers to assist with estimation skills.  
c. rewriting a multi-digit number as an addition problem.  
d. representing a number in 3 or more ways.

12. Greater than is represented with the symbol:

a. -  
b. +  
c. <  
d. >

13. Experimental probability is calculated by

a. guessing the possible outcome  
b. calculating the number of anticipated outcomes divided by the number of possible outcomes  
c. calculating the number of actual occurrences divided by the number of anticipated occurrences  
d. calculating the number of actual occurrences divided by the number of trials

14. The variable expression for 7 more than a number is:

a. 7x  
b. n + 7  
c. 7 / x  
d. x > 7

15. According to Sayeski and Paulsen (2010), one reason that students with disabilities struggle with “reform curricula” is:

a. Skills are taught using a spiraled curriculum (meaning nothing is taught to mastery).  
b. Skills are taught using a direct instruction methodology to mastery  
c. The curriculum never addresses problem-solving skills or complex thought process  
d. The curriculum does not provide opportunities for students to practice the skills

16. Which of the following is not one of the National Council of the Teaching of Mathematics content standards?
17. Instructional delivery through the explicit teaching cycle should include all of the following considerations EXCEPT:

a. A plan for frequent student responses
b. Homework assigned based on newly taught skills
c. Adequate processing time for student responses
d. Corrective feedback when errors are made

18. In which stage of the explicit teaching cycle should teachers present new material, concepts, or skills?

a. Advance organizer
b. Demonstration
c. Independent practice
d. Maintenance

19. Ashlock (2010) indicates that students should use a paper-and-pencil instructional method when learning new math skills because:

a. It allows the teacher to see the students’ thought processes and correct any errors
b. It allows students the opportunities to make mistakes and correct their errors
c. It is important to use a method that will be available to all learners in the classroom
d. It is a cheaper way of showing mastery of new math skills than buying technology

20. When answering a math problem, if students jump to conclusions before considering all of the information, they have most likely displayed what type of math misconception?

a. Overgeneralization
b. Fact inaccuracy
c. Overspecialization
d. Error in logic

21. Which of the following is not an essential mathematical domain that students should have mastered prior to taking algebra, according to Impevcoven-Lind and Foegen (2010)?

a. Measurement of lines and angles
b. Fluency with whole numbers
c. Fraction operations and concepts
d. Use of formulas to find perimeter,
22. According to Fuchs and Fuchs (2010), in which instructional category would a student’s score fall if they were in 3rd grade and scored a median of 8 digits correct on a one-minute timed probe of basic math facts?

a. Mastery c. Instructional
b. Independent d. Frustrational

23. Which of the following would be an inappropriate accommodation on a math assessment?

a. Additional time on a timed fluency probe
b. The use of a calculator on an Algebra exam
c. Reading the word problems to a student with a learning disability
d. Using representational drawings on a 3rd grade assessment

24. A student provides the following answers when simplifying algebraic equations:

\[
\begin{align*}
6(1 + 4x) + 2 &= 6(5x) + 2 = 30x + 2 \\
7 + 5(2 + 3x) &= 7 + 5(5x) = 7 + 25x
\end{align*}
\]

Based on an analysis of the student’s error pattern, which of the following skills most likely needs to be taught?

a. Order of operations c. Multiplying numbers that are and are not coefficients
b. Adding numbers that are and are not coefficients d. Simplifying algebraic equations

25. If a teacher is trying to assess whether or not a student understands that a digit’s value in a numeral is determined by the place where it is written, which probing question might the teacher ask?

a. “As you decide what the number is, do you add, subtract, multiply, or divide?”
   c. “Can you write other fractions that equal the same thing?”
b. “How would you find the missing number?”
   d. “How do you know whether to use the tens or ones blocks for 2?”