*MODULE 6.3*

CURRICULUM AND INSTRUCTION
THE TEACHING OF MATHEMATICS

# POSTASSESSMENT ANSWER KEY

*Teacher Induction Program*

Teacher Education Council, Department of Education

# POSTASSESSMENT

DIRECTIONS: Read each item carefully. Choose the letter of the best answer.

1. Which of the following best defines mathematics?
    A. It is an exact science of numbers.
    B. It is a study of patterns and relationships.
    C. It is a series of arbitrary rules and procedures.
    D. It is the study of numbers, variables, and the operations relating the numbers and variables.
2. Which of these statements about learning mathematics is TRUE?
    A. Only very intelligent people can learn mathematics.
    B. Learning mathematics means mastering a fixed set of basic skills.
    C. Learning mathematics is about getting the right answers.
    D. Learning mathematics is about finding patterns and relationships to solve problems.
3. All of these statements are myths about mathematics learning EXCEPT one. Which is it?
    A. Males are better in mathematics than females.
    B. If you are good in English, you are not good in mathematics.
    C. Mathematics requires the memorization of a lot of rules and formulas.
    D. There are many ways to solve a mathematics problem.
4. The following are the broad goals of mathematics education EXCEPT one. Which is it?
    A. To solve problems
    B. To compute mentally
    C. To value mathematics
    D. To reason mathematically

5. What is constructivism?

   A. A theory about teaching which emphasizes cooperative work and discussion.

   B. A theory about teaching which states that teachers are facilitators rather than transmitters of knowledge.

   C. A theory about learning which states that it is the learner who builds his or her own understanding.

   D. A theory about learning which states that learners learn through drill and repetition.

6. Teachers teach best when they define terms, state all laws/rules, explain the lesson in detail, and answers all questions. This belief is characteristic of what theory of learning?

   A. Behaviorism C. Cognitivism

   B. Constructivism D. Pragmatism

7. Which kind of question requires students to think more critically?

   A. Convergent C. Divergent

   B. Memory D. Comprehension

8. Which teaching strategy is viewed as least effective in promoting meaningful learning?

   A. Lecture C. Inquiry

   B. Problem-based D. Concept Attainment

9. Which of these questions requires a higher-order level of thinking?

   A. What is the value of $\pi$?

   B. What is the sum of –19 and 4?

   C. In how many ways can you add 18 and 29?

   D. State the Pythagorean Theorem in your own words.

10. What is the best reason for using cooperative learning in the classroom?
    A. The class has time to spare for a group activity.
    B. The teacher has a sore throat and cannot talk much.
    C. The students need to work collaboratively to learn from each other.
    D. The students need to do something exciting and engaging to promote learning.
11. Which strategy is used when you want students to discover the essential attributes of a concept?
    A. concept formation
    B. concept attainment
    C. concept practice
    D. concept instruction
12. What do you call the process of gathering information about students?
    A. Testing
    B. Assessment
    C. Evaluation
    D. Interviewing
13. Which is a good assessment practice?
    A. Written tests are used exclusively.
    B. Calculators are excluded from testing
    C. Multiple assessment techniques are employed.
    D. A number of specific and isolated skills are tested.
14. Which of the following is a characteristic of authentic assessment?
    A. It is a standardized assessment tool.
    B. It measures performance rather than competence.
    C. It is teacher-centered with very little student choice and participation.
    D. It involves students in tasks that are worthwhile, significant and meaningful.
15. Why use portfolio assessment?
    A. To emphasize process, product, and growth.
    B. To emphasize knowledge, curriculum, and skills.

C. To emphasize standards, application, and transfer.

D. To emphasize independence, accountability, and multiple intelligences.

B. DIRECTIONS: Read and reflect on each item. Answer each question briefly.

1. What is the most important thing a student can learn in your mathematics class?

2. How do students learn mathematics?

3-4. Discuss two (2) effective strategies in teaching mathematics.

5. How should one assess students' learning in mathematics?