

ASSESSMENT 02

UNIQUE NUMBER – 566940

Closing date: 19 June 2023

The questions are based on learning units 2, 3 and 4

- 1** From a constructivist perspective, it is important to create learning environments and learning activities that enable learners' construction of knowledge rather than just absorb it. Write a 1000-word essay in which you critically respond to this statement with a lens on the teaching of numbers, patterns, and relationships in any grade in the Intermediate Phase. You should include examples, either from your learning experience at school, general reading, or observation as a learner to illustrate the points that you make.

Please use the rubric 1, provided at the end of this Tutorial Letter, to guide the structuring of your essay. It is important that you use this rubric to do self-evaluation before you submit to ensure that you have completed all the required elements for the essay adequately.

[30]

- 2** A Unisa mathematics student teacher argued with his Teaching Practice mentor that "It is easier for a teacher to teach using rote learning and constructivism does not work in the real classroom setting". Reflect on what this statement means for you as a Unisa student teacher. (10)
- 3** Use compensation to add or subtract the following:
- (a) $468 + 59$ (2)
 - (b) $458 - 49$ (2)
 - (c) $499 + 599 + 699$ (2)
 - (d) $10\,000 - 599$ (2)
- 4** Illustrate the following numbers using base 10 blocks:
- (a) 345 (2)
 - (b) 676 (2)
 - (c) 1050 (2)

- (d) 2576 (2)
(e) 11 (2)

5 Test the following numbers for divisibility by 5, 6 and 11. (Do not divide or factorise.)

- a) 9 898 350 (3)
b) 76 885 976 (3)

6 Mathematics proficiency denotes an integration of mathematical ideas such that their functional understanding is formed. In view of this statement, answer the following questions:

- a) How would you differentiate between mathematical proficiency and mathematical teaching proficiency? (4)
b) What are the benefits of mathematical proficiency? Use your own words to answer this question. (3)
- 7** When you set tasks for your learners, you could tell them: "Use the ideas you own to solve this problem".

- a) What does this statement mean for you? (2)
b) What does it mean to say that a task has multiple entry points? (2)
c) Describe any mathematical task for intermediate phase learners where you can use at least two entry points. (5)
- 8** You want to buy a book priced R108, but you find you only have R79 in your purse.

Think of ways in which you can find how much money you still need. You do not have pen and paper or a calculator with you, and you do not want to rely on the salesperson to work it out. There are various ways in which you can reason to find the answer. Describe two ways you would go about making the calculations to determine how much more you need to purchase the book. (6)

9 Use the following models to show the equivalence of the fractions $\frac{3}{5}$ and $\frac{6}{10}$

- a) Set model

b) Area model

c) Number line

(6)

10 Compare the following fractions $\frac{3}{5}$ and $\frac{3}{7}$ by using the set model you explained above. Make accurate drawings. (4)

11 Fill in the missing numbers to make the fractions equivalent:

a) $\frac{1}{2}$ and $\frac{\quad}{8}$ (1)

b) $\frac{4}{12}$ and $\frac{\quad}{60}$ (1)

c) $\frac{2}{3}$ and $\frac{\quad}{12}$ (1)

d) $\frac{4}{4}$ and $\frac{\quad}{8}$ (1)

MODULE NAME: ORIENTATION TO PRIMARY MATHEMATICS	MODULE CODE: OPM1501
STUDENT NAME:	STUDENT NUMBER:

Assessment 2, Question 1 Rubric
(Marks: 30)

ACADEMIC CONTENT CRITERIA	LEVELS OF				
	Poor	Developing	Good	Excellent	
ELEMENT	Score Ranges Per Level				
Description of the theory of constructivism and its practical implications	No attempt is made to analyse the theory.	Student attempts to analyse, but there is lapses in understanding of theory.	An attempt is made to apply understanding but lacks depth of analysis.	Shows an in-depth understanding of theory.	/10
Application of the constructivist theory in teaching numbers, patterns, and relationships	No evidence of practical implementation of the theory of constructivism.	Practical examples are very general in theory and are not described in detail.	Shows understanding but practical examples do not entirely reflect the ideals of a constructivist approach to teaching.	Provides an accurate account of what is required in the classroom.	/10
Suitable numbers, patterns, and relationships strategies	No strategies identified OR strategies identified but with no pedagogical reasoning.	Only identified one strategy OR identified two but with very vague reasoning and no examples OR reasoning does not make pedagogical sense.	Identified two good strategies with sufficient reasoning but lacks solid, convincing examples.	Identifies two strategies and provides sound reasoning and excellent practical teaching examples.	/5
Academic writing	Essay is of poor quality; student has not used their own words or is difficult to follow because it has no logical structure and	The essay has potential, but language usage, spelling and grammar need attention. Referencing (in -text and	Good essay, a few spelling and grammar mistakes and language usage is generally professional. Student might	The student presented a logical and well- structured essay with clear introductory, body	/5
	flow. Referencing (in -text and reference list) is poor (not consistent with the Harvard referencing style).	reference list) is partially correct (not fully consistent with the Harvard referencing style).	have written a great essay but there are no paragraphs and structure. Referencing (in - text and reference list) is correct (consistent with the Harvard referencing style) with minor deviations and inconsistencies (3 or less).	and concluding elements. No colloquialisms were used, and language utilisation is of high quality. Spelling, grammar is all perfect/near perfect. There is perfect referencing (in -text and reference list) and all sources have been referenced.	
TOTAL: _____ / 30					

DECLARATION

(Your assessment/exam script will not be marked if this is not completed)

I, (Name
& Surname)

Student number: Module

code:

Hereby declare the following:

I understand UNISA'S policy on plagiarism. This examination is my original work produced by myself. I have duly acknowledged all the other people's work (both electronic and print) through the proper reference techniques as stipulated in this module.

I have not copied work of others and handed it in as my own. I have also not made my work available to any fellow students to submit as their own.

Signature:.....Date:.....