



Window into First Year Students' Preparedness: Basic Arithmetic and Algebra

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ABSTRACT This paper reports on the results of a diagnostic quiz for basic arithmetic and algebra. The quiz items were based on elementary knowledge and skills expected of first year students to perform essential mathematical tasks and to communicate the results of such tasks. The quiz was taken online voluntarily by 428 first year students who were registered for a calculus module at a South African university. The multiple choice items in the quiz focused on: Operations on numerical fractions; Operations on algebraic fractions; Operations with monomials; Operations with exponents; Operations with logarithms; Linear equations and linear inequalities. Results indicated that a significantly large number of the respondents did not have the necessary level of preparedness to successfully study the calculus module that they were enrolled for. The percentages of students lacking the relevant knowledge and skills for the indicated sections are documented in the results section of the paper.