B5.1.1-05 - 1:55 p.m. | Contributed | Pre-instruction Math Quiz May Predict Students' Physics Course Performance

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In a five-year multi-institutional study, we have administered a small set of pre-college mathematics problems to nearly 7000 students enrolled in introductory college physics courses. We found consistently that over 30% of students have considerable difficulty with basic algebraic, trigonometric, and graphing operations, with symbolic representations posing a particularly notable obstacle. We will present our most recent findings, including substantial evidence that student performance on even a small set of these types of problems may be able to provide early warning of probable weak course performance. Supported in part by NSF DUE #1504986 and #1914712