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Using a pre-instruction math test to predict first-year physics exam results

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We investigated the results of pre-instruction mathematics test and introductory physics exams of two groups of first-year engineering students at Suranaree University of Technology. We intend to examine the test results to identify factors that predict exam results in the first-year physics course. The first and the second groups took their physics classes in the first and second trimester of the academic year 2020 respectively. Here, we report our analysis of the pre-instruction math tests and claim that they meet reasonable standards for reliability and validity. As a by-product of this investigation, we found that there was no gender gap in the math test results.

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