



Raw Score Versus Standards Performance Index (SPI)

Many people understand assessment based on their own experiences with classroom assessments. Often in those situations, test questions are scored either as correct or incorrect and the score is reported as a percentage (number correct divided by the total number of questions). Grades are assigned based on a teacher's determination of what level of performance or percentage is a passing grade.

The Forward Exam is scored by a different process known as Item Response Theory (IRT). For large-scale standardized assessments, IRT scoring is a more accurate representation of students' knowledge of the content area. With IRT, each test question is treated independently and viewed as samples of the reporting category (e.g., algebra, geography, vocabulary) with questions varying in difficulty. Correctly answering a more difficult question will contribute more towards a higher score than correctly answering an easier question. Therefore, answering a more difficult question correctly will have a greater effect on the overall score than answering a difficult question incorrectly.

The Standards Performance Index (SPI) is a score produced by IRT. The formula for calculating the SPI takes into account question difficulty within the reporting category, as well as student overall performance on the content area test. SPI estimates how many questions a student would have answered correctly if there had been 100 questions covering that reporting category on the test.

For example:

There are 10 test questions, covering a range of difficulty, in the algebra reporting category on the mathematics test.

Student A answers 6 questions correctly and has a raw score of 6 out of 10 in the algebra reporting category. Student A receives a SPI level of proficient because the 6 questions that student answered correctly were more difficult and the student also performed better on other reporting categories on the mathematics test.

Student B answers 6 questions correctly and has a raw score of 6 out of 10 in the algebra reporting category. Student B receives a SPI level of basic because the 6 questions that student answered correctly were easier and the student also did not perform well on other reporting categories on the mathematics test.

A more thorough discussion of SPI is available in the [Standards Performance Index \(SPI\) Handout](#).