

CW: Some mastery tests do not report percentage scores

PRODUCTS AFFECTED

- PLATO Web Learning Network
- PLATO Pathways 4.X

SYMPTOMS

Some mastery tests do not give percentage scores, although they give mastery based on achieving 80%. Why doesn't the score appear?

CAUSE

Many of the PLATO curricula use adaptive mastery tests. There is a maximum number of questions given to a learner, usually 5 or 10. However, as soon as the learner either answers enough questions correctly to achieve 80% of that number or answers enough questions incorrectly so that 80% cannot be achieved, the test is ended. The advantage of an adaptive test is that it may not require as many questions to determine mastery or non-mastery of the objective.

There is no reliable way to know how the learner would have performed on the questions that were not asked. A mastery could have resulted from any possible score between 80% and 100%, and a non-mastery could have resulted from any possible score below 80%.

For example, if a student answers 3 questions correctly, then 2 incorrectly, the result is non-mastery. If the learner were presented those same last 2 questions first and the student answered them incorrectly, however, the test would end immediately. It is not valid to infer that the scores in those two scenarios should be 60% and 0%, since the only difference between them is the random order in which the questions were given.

The curricula that use adaptive mastery tests include the following:

- Applied Math
- Data Skills
- Essential Reading Skills
- Communication
- Geometry and Measurement 1
- Geometry and Measurement 2
- Math Fundamentals
- Quality Fundamentals
- Reading 1 (available on PLATO Pathways only)
- Reading 2 (available on PLATO Pathways only)
- Reading for Information
- Reading Strategies (Fundamental, Intermediate, and Advanced)
- Science Fundamentals
- Social Studies
- Technology Fundamentals (also known as Applied Physical Science)
- Trigonometry

- Writing in the Workplace
- Writing Series

There are other curricula which use non-adaptive mastery tests and therefore give a fixed number of questions each time a learner takes a test. These do give scores and do not end the test early based on how the learner is performing on the test.

The curricula that use non-adaptive mastery tests and give a percentage score as well as mastery include:

- Algebra 1
- Algebra 2
- Advanced Writing Process and Practice
- Beginning Reading for the Real World
- Biology Series
- Chemistry Series
- Essential Writing Process and Practice
- Fundamental Writing Process and Practice
- Intermediate Writing Process and Practice
- Math Expeditions
- Reading Explorations
- Worldview Social Studies

There are other curricula that do not use mastery tests as such, such as:

- Calculus 1 and Calculus 2
- Chemistry 1 and Chemistry 2
- Math Problem Solving
- Physics 1 and Physics 2
- Vocabulary and Reading Comprehension

SOLUTION

You may wish to count the percentage of modules mastered in a course or other learning path as a way to determine a percentage score.

Future courseware development may include additional curricula that use mastery tests that produce a score.