

HEIghten® Quantitative Literacy Assessment

Performance Level Descriptions for earning a Certificate & Badge

Advanced (Scaled Score Range 171-180)

A typical student at the advanced level has demonstrated the ability to:

- reason through long, complicated word problems and extract relevant information to develop an appropriate model.
- recall and apply standard definitions, formulas or algorithms that are appropriate for a given problem.
- set up and solve a model in a real-world context with two or three variables.
- solve complex multistep problems.
- use and understand basic algebra to solve equations that model a problem, e.g., use variables appropriately, manipulate and simplify algebraic expressions.
- use and understand basic facts of Euclidean geometry to model and solve problems, e.g., know formulae for perimeter, area and volume, parallel and perpendicular lines.
- compute and interpret percents and percent change.
- read and interpret a chart or graph and extract data needed to solve a problem.
- solve problems using proportional reasoning.
- perform the four basic operations (addition, subtraction, multiplication and division) with integers, decimals and fractions.
- recognize when there is insufficient information provided to solve a problem.
- read and interpret relationships between quantities expressed in terms of equations, formulas or data representations.
- use correct mathematical terminology and notation for communicating results.

Proficient (Scaled Score Range 157-170)

A typical student at the proficient level has demonstrated the ability to:

- reason through a problem in a real context, understand relevant nuances of context and translate to an equation to solve.
- apply solution strategy of “plugging in appropriate numbers” or using a relevant example.
- set up a model in a real-world context with two or three variables, but may have difficulty solving the model.
- solve simple multistep problems.
- recall and use basic algebra to solve equations that model a problem, but may have difficulty with algebraic manipulation.
- recall and use basic facts of Euclidean geometry to model and solve problems, but may not recall all the necessary facts.

- compute and interpret percents and percent change, but may have difficulty with percents greater than 100, and negative percent change.
- read a chart or graph, but may have difficulty interpreting the data presented.
- perform the four basic operations (addition, subtraction, multiplication and division) with integers and decimals, but not necessarily fractions.
- choose appropriate variables for data in a problem, e.g., let J be the number of cartons of juice purchased.
- read and interpret relationships between quantities expressed in terms of equations, formulas or data representations, but may have difficulty with multiple variables or complex data representations.
- recognize correct mathematical terminology and notation for communicating results, but may use terminology or notation incorrectly.