Direct Mathematics Assessment

Approximate length Goal for Main Study	30 minutes (part of 90 minute student assessment and survey)
Mode of administration	Computerized administration using Chromebooks, tablet-like computers with touchscreen capability and an attached keyboard, that will be brought in to the school by the study
Key constructs (bullets represent learning progression)	**Number System** • finding common factors and multiples • comparing fractions • applying basic operations with fractions and integers to word problems • using basic operations • representing and understanding rational numbers in multiple forms • understanding the relative size of irrational numbers **Proportional Relationships** • extending students' understanding of the number system • multiplying and dividing fractions and multiplicative thinking • understanding basic concepts of ratio, rate and proportional relationships • using rational numbers to solve problems and understand slope and functions **Expressions and Equations** • understanding the use of expressions beginning with letter representations of a single number • applying knowledge of rational numbers and operations to solve equations • constructing equations and inequalities to solve real-world problems • recognizing different types of notation (such as square root) • reasoning with equalities and inequalities • solving and representing linear equations and inequalities **Functions** • understanding the definition of a function • comparing functions represented in different ways • distinguishing between linear and nonlinear functions • comparing and creating representations of different functions • understanding of functions to context