**Session Four: Tables and Meaningful Expressions**

**Common Core Standards Addressed**

#### Grade 2

#### Work with time and money.

[CCSS.Math.Content.2.MD.C.7](http://www.corestandards.org/Math/Content/2/MD/C/7/)
Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

[CCSS.Math.Content.2.MD.C.8](http://www.corestandards.org/Math/Content/2/MD/C/8/)
Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

#### Grade 3

[CCSS.Math.Content.3.OA.D.9](http://www.corestandards.org/Math/Content/3/OA/D/9/)
Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends*.

#### Grade 4

#### Solve problems involving measurement and conversion of measurements.

[CCSS.Math.Content.4.MD.A.1](http://www.corestandards.org/Math/Content/4/MD/A/1/)
Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*

#### Grade 6

#### Understand ratio concepts and use ratio reasoning to solve problems.

[CCSS.Math.Content.6.RP.A.3.a](http://www.corestandards.org/Math/Content/6/RP/A/3/a/)
Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

#### Grade 7

Investigate chance processes and develop, use, and evaluate probability models.

[CCSS.Math.Content.7.SP.C.8](http://www.corestandards.org/Math/Content/7/SP/C/8/)
Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

[CCSS.Math.Content.7.SP.C.8.a](http://www.corestandards.org/Math/Content/7/SP/C/8/a/)
Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

[CCSS.Math.Content.7.SP.C.8.b](http://www.corestandards.org/Math/Content/7/SP/C/8/b/)
Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.

[CCSS.Math.Content.7.SP.C.8.c](http://www.corestandards.org/Math/Content/7/SP/C/8/c/)
Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*

#### Grade 8

#### Define, evaluate, and compare functions.

[CCSS.Math.Content.8.F.A.2](http://www.corestandards.org/Math/Content/8/F/A/2/)
Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change*.

#### Use functions to model relationships between quantities.

[CCSS.Math.Content.8.F.B.4](http://www.corestandards.org/Math/Content/8/F/B/4/)
Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (*x, y*) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

[CCSS.Math.Content.8.F.B.5](http://www.corestandards.org/Math/Content/8/F/B/5/)
Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.