

TECHNOkids[®] Common Core



Mathematics Standards

*Correlation of TechnoKids Technology Projects by Grade to Common
Core Mathematic Standards*

Code		Common Core Standard: Grade 4 Mathematics		Candy	Trivia
Operations & Algebraic Thinking					
CCSS.Math.Content.4.OA.C.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.	•			
Number & Operations in Base Ten					
CCSS.Math.Content.4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.	•			
Measurement & Data					
CCSS.Math.Content.4.MD.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	•		•	

Code		Common Core Standard: Grade 5 Mathematics		Candy	Trivia
Operations & Algebraic Thinking					
CCSS.Math.Content.5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	•			
CCSS.Math.Content.5.OA.A.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.	•			
Geometry					
CCSS.Math.Content.5.G.A.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	•			
CCSS.Math.Content.5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	•	•		

Code		Common Core Standard: Grade 6 Mathematics		Restaurateur	Trivia
Ratios & Proportional Relationships					
CCSS.Math.Content.6.RP.A.3	Use ratio and rate reasoning to solve real-world and mathematical problems.	•	•		
The Number System					
CCSS.Math.Content.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	•			
CCSS.Math.Content.6.NS.C.6	Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	•			
Expressions & Equations					
CCSS.Math.Content.6.EE.A.2	Write, read, and evaluate expressions in which letters stand for numbers.	•			
CCSS.Math.Content.6.EE.A.3	Apply the properties of operations to generate equivalent expressions.	•			
CCSS.Math.Content.6.EE.B.5	Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	•			
CCSS.Math.Content.6.EE.B.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	•			
CCSS.Math.Content.6.EE.B.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.	•			
CCSS.Math.Content.6.EE.C.9	Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	•			
Statistics & Probability					
CCSS.Math.Content.6.SP.A.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	•	•		
CCSS.Math.Content.6.SP.A.2	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	•			
CCSS.Math.Content.6.SP.B.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	•	•		
CCSS.Math.Content.6.SP.B.5	Summarize numerical data sets in relation to their context.	•	•		

Code		Common Core Standard: Grade 7 Mathematics		Restaurateur	Budget
Ratios & Proportional Relationships					
CCSS.Math.Content.7.RP.A.2	Recognize and represent proportional relationships between quantities.	•	•		
CCSS.Math.Content.7.RP.A.3	Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	•	•		
The Number System					
CCSS.Math.Content.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.				•
CCSS.Math.Content.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.	•	•		
Expressions & Equations					
CCSS.Math.Content.7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	•			
CCSS.Math.Content.7.EE.A.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	•	•		
CCSS.Math.Content.7.EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	•	•		
CCSS.Math.Content.7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	•	•		
Geometry					
CCSS.Math.Content.7.G.A.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	•			
Statistics & Probability					
CCSS.Math.Content.7.SP.A.1	Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	•	•		
CCSS.Math.Content.7.SP.A.2	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. Gauge how far off the estimate or prediction might be.	•	•		
CCSS.Math.Content.7.SP.B.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.	•	•		
CCSS.Math.Content.7.SP.C.6	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.	•	•		
CCSS.Math.Content.7.SP.C.7	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	•	•		
CCSS.Math.Content.7.SP.C.8	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	•	•		

Code		Common Core Standard: Grade 8 Mathematics			
		Restaurateur	Budget	Questionnaire	Investor
Expressions & Equations					
CCSS.Math.Content.8.EE.B.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	•		•	•
Functions					
CCSS.Math.Content.8.F.A.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	•			•
CCSS.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).	•	•	•	•
CCSS.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	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.	•	•	•	•
Statistics & Probability					
CCSS.Math.Content.8.SP.A.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.			•	