



TABE 13/14 Skills Crosswalk

Mathematics



Domain NUMBERS AND OPERATIONS

Level D

TABE Skill Description	Standard	CCR Standard Description
Compare negative numbers	6.NS.7	Understand ordering and absolute value of rational numbers. (6.NS.7a, 6.NS.7b, 6.NS.7c, 6.NS.7d)
Compute unit rates using ratios of fractions	7.RP.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.
Consistently represent real-world situations with rational numbers	6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
Find a percent of a total	6.RP.3	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
Find distance between points on a coordinate plane with a common coordinate given a coordinate grid	6.NS.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.
Find distance between points on a coordinate plane with a common coordinate without a given coordinate grid	6.NS.8	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.
Find the value of the absolute value of a number	6.NS.7	Understand ordering and absolute value of rational numbers. (6.NS.7a, 6.NS.7b, 6.NS.7c, 6.NS.7d)
Identify and represent approximations of irrational numbers	8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2).
Identify and represent approximations of irrational numbers on a number line	8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2).
Identify and represent rational numbers on a number line	6.NS.7	Understand ordering and absolute value of rational numbers. (6.NS.7a, 6.NS.7b, 6.NS.7c, 6.NS.7d)
Identify and represent the absolute values and opposites of numbers on a number line	6.NS.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. (6.NS.6a, 6.NS.6b, 6.NS.6c)
Identify situations in which opposites combine to make 0	7.NS.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. (7.NS.1a, 7.NS.1b, 7.NS.1c, 7.NS.1d)

Domain **NUMBERS AND OPERATIONS** (cont)

Level D

TABE Skill Description	Standard	CCR Standard Description
Identify the constant of proportionality (or unit rate) associated with ratios of whole numbers and fractions	7.RP.2	Recognize and represent proportional relationships between quantities. (7.RP.2a, 7.RP.2b, 7.RP.2c, 7.RP.2d)
Inconsistently represent real-world situations with rational numbers	6.NS.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
Plot pairs of values on a coordinate grid	6.NS.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. (6.NS.6a, 6.NS.6b, 6.NS.6c)
Solve one-step problems, with and without context, involving operations with positive and negative integers	7.NS.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. (7.NS.1a, 7.NS.1b, 7.NS.1c, 7.NS.1d)
Solve problems by finding and applying unit rates	7.NS.3 6.RP.3	Solve real-world and mathematical problems involving the four operations with rational numbers. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
Solve problems, with and without context, involving operations with positive and negative integers	7.NS.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
Use ratios to convert measurement units	6.RP.3	Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
Write an equation to represent a proportional relationship	7.RP.2	Recognize and represent proportional relationships between quantities. (7.RP.2a, 7.RP.2b, 7.RP.2c, 7.RP.2d)

Domain **ALGEBRAIC CONCEPTS**

Level D

TABE Skill Description	Standard	CCR Standard Description
Apply the properties of integer exponents	8.EE.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions.
Consistently compare the unit rates of two proportional relationships represented in different ways	8.EE.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

TABE Skill Description	Standard	CCR Standard Description
Consistently write or solve expressions and equations involving the distributive property and combining like terms	8.EE.7	Solve linear equations in one variable.
Express very large and very small numbers in scientific notation	8.EE.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
Factor linear expressions with rational coefficients	7.EE.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
Graph systems of linear equations and find the point of intersection to approximate the solution	8.EE.8	Analyze and solve pairs of simultaneous linear equations. (8.EE.8a, 8.EE.8b, 8.EE.8c)
Identify and create examples and non-examples of functions	8.F.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.
Identify points included in the graph of a function	8.F.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.
Identify simple characteristics of different intervals of graphs of functions, with and without context	8.F.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.
Identify simple characteristics of graphs of functions (e.g., increasing, linear, etc.)	8.F.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
Identify the rate of change of a linear function represented by a description	8.F.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.
Inconsistently compare the unit rates of two proportional relationships represented in different ways	8.EE.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
Inconsistently write or solve expressions and equations involving the distributive property and combining like terms	8.EE.7	Solve linear equations in one variable.
Rewrite an expression in a different form to show a relationship between quantities	7.EE.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.

Domain **ALGEBRAIC CONCEPTS** (cont)

Level D

TABE Skill Description	Standard	CCR Standard Description
Solve equations involving square and cube roots of perfect squares and cubes	8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
Solve multi-step real-world problems with rational numbers	7.EE.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.
Solve problems leading to two linear equations in two variables	8.EE.8	Analyze and solve pairs of simultaneous linear equations. (8.EE.8a, 8.EE.8b, 8.EE.8c)
Solve real-world problems leading to equations of the form $px + q = r$	7.EE.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. (7.EE.4a, 7.EE.4b)
Use square root symbols to express solutions to simple equations with squares	8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
Write linear equations to represent real-world situations	7.EE.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. (7.EE.4a, 7.EE.4b)

Domain **GEOMETRY**

Level D

TABE Skill Description	Standard	CCR Standard Description
Explore the effects of simple transformations (90 or 180 degree rotations, reflections, and translations) on common plane figures	8.G.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
Solve problems involving finding area from scale drawings	7.G.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.
Solve problems involving finding length from scale drawings	7.G.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.
Solve real-world problems involving finding volume of objects formed by composing right prisms	7.G.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

TABE Skill Description	Standard	CCR Standard Description
Use a series of simple transformations (90 or 180 degree rotations, reflections, translations, and dilations) to show congruence or similarity	8.G.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
Use a series of simple transformations (reflections, translations, and dilations) to show congruence or similarity	8.G.2 8.G.4	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
Use facts about supplementary, complementary, vertical, and adjacent angles to find an unknown angle along a line	7.G.5	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.
Use facts about supplementary, complementary, vertical, and adjacent angles to find an unknown angle around a triangle	8.G.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.
Use facts about supplementary, complementary, vertical, and adjacent angles to find an unknown angle in figures	7.G.5	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.
Use facts about supplementary, complementary, vertical, and adjacent angles to solve problems	7.G.5	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.
Use the formulas for the area and circumference of circles to solve problems	7.G.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
Use the Pythagorean theorem to find missing side lengths of right triangles both on and off the coordinate plane given a graphic	8.G.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
Use the Pythagorean theorem to find missing side lengths of right triangles without a graphic	8.G.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

TABE Skill Description	Standard	CCR Standard Description
Consistently use basic probability models to simulate events and generate random data (e.g., using spinners, rolling dice, flipping coins, etc.)	7.SP.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.
Create and use information presented in two-way tables to solve simple problems	8.SP.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.
Describe a data set being measured in a context	6.SP.5	Summarize numerical data sets in relation to their context, such as by: (6.SP.5a, 6.SP.5b, 6.SP.5c, 6.SP.5d)
Describe patterns in a data set (e.g. outliers or clustering)	8.SP.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
Describe patterns of association between two quantities represented in scatter plots of bivariate data (e.g., linear, increasing, outliers, clustering, etc.)	8.SP.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
Draw lines of best fit to model linear relationships between the variables	8.SP.2	Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
Find a measure of center and variability of a given data set	6.SP.5	Summarize numerical data sets in relation to their context, such as by: (6.SP.5a, 6.SP.5b, 6.SP.5c, 6.SP.5d)
Find the probability of a simple event	7.SP.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. (7.SP.7a, 7.SP.7b)
Identify errors in selecting a representative sample of a population	7.SP.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.
Identify sample as representative or not representative of a population	7.SP.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.

TABE Skill Description	Standard	CCR Standard Description
Inconsistently use basic probability models to simulate events and generate random data (e.g., using spinners, rolling dice, flipping coins, etc.)	7.SP.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.
Interpret probabilities as unlikely or likely	7.SP.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
Interpret the slope and y-intercept of a linear model	8.SP.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.
Use data to draw inferences	7.SP.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.
Use measures of center and variability of given data sets to draw inferences	7.SP.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.
Use measures of center and variability of given data sets, represented in multiple ways, to draw comparative inferences	7.SP.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.
Use the equation of a linear model to make an estimate	8.SP.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

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