



TABE 13/14 Skills Crosswalk

Mathematics



Domain NUMBERS AND OPERATIONS

Level M

TABE Skill Description	Standard	CCR Standard Description
Add and subtract multi-digit whole numbers	4.NBT.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.
Compare multi-digit numbers using place value	4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
Compare the values of digits in multi-digit numbers and observing patterns	4.NBT.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
Consistently use a ratio to represent a real-world situation	6.RP.2	Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.
Convert a fraction with denominator 10 or 100 to a decimal	4.NF.6	Use decimal notation for fractions with denominators 10 or 100.
Divide multi-digit decimals	6.NS.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
Divide two-, three-, and four-digit whole numbers by one- and two-digit whole numbers	4.NBT.6 5.NBT.6 6.NS.2	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. Fluently divide multi-digit numbers using the standard algorithm.
Express a given base ten number as a single digit multiplied by a power of 10	5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
Express the division of two whole numbers as a fraction in a real-world context	5.NF.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
Inconsistently use a ratio to represent a real-world situation	6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

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Multiply by powers of 10 expressed using exponents	5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
Multiply two-, three-, and four-digit whole numbers by one- and two-digit whole numbers	5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm.
Round multi-digit whole numbers to any place value	4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.
Solve problems using multiplication of fractions with different denominators	5.NF.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
Solve real-world problems using addition, subtraction, multiplication, and division with decimals to the hundredths place	5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
Solve real-world problems using addition, subtraction, multiplication, and division with money in dollars and cents	5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
Solve simple, one-step, real-world problems involving addition or subtraction of fractions with different denominators or multiplication or division involving a unit fraction	5.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
Solve simple, one-step, real-world problems involving multiplication or division involving a unit fraction	5.NF.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (5.NF.7a, 5.NF.7b)
Use multiple representations to create equivalent fractions	4.NF.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
Use the distributive property to rewrite a sum by factoring out a common factor	6.NS.4	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.

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Consistently write and solve expressions and equations to represent verbal descriptions (e.g., the product of twice a number, n , and 6) and real-world situations	4.OA.2 6.EE.6	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison. 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.
Evaluate multi-step expressions involving addition, subtraction, multiplication, division, and grouping symbols without context	5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
Evaluate numerical expressions involving whole-number exponents	6.EE.1	Write and evaluate numerical expressions involving whole-number exponents.
Extend a shape pattern	4.OA.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.
Generate a number pattern given a starting number and rule	4.OA.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.
Identify a value that makes an multi-step inequality true	6.EE.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.
Inconsistently write and solve expressions and equations to represent verbal descriptions (e.g., the product of twice a number, n , and 6) and real-world situations	4.OA.1 5.OA.2 6.EE.7	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. 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.
Interpret numerical expressions without evaluating them	5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
Represent a real-world situation on a graph (quadrant I only)	6.EE.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.

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Solve multi-step equations involving addition, subtraction, multiplication, and division of rational numbers	6.EE.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.
Solve multi-step, real-world problems involving addition, subtraction, multiplication, division, and grouping symbols, including interpreting remainders	4.OA.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
Solve real-world multiplicative comparison problems	4.OA.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
Use an inequality to represent a real-world situation	6.EE.8	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.
Use exponents to show repeated multiplication	6.EE.4	Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).
Use expressions and equations to represent division relationships expressed in words	6.EE.2	Write, read, and evaluate expressions in which letters stand for numbers. (6.EE.2a, 6.EE.2b, 6.EE.2c)
Use expressions and equations to represent multiplicative relationships expressed in words	4.OA.1 4.OA.2	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
Write and solve expressions and equations to represent real-world situations given in a table	6.EE.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.
Write and solve multi-step equations involving addition, subtraction, multiplication, division, the distributive property, and exponents (squares and cubes) with rational numbers	6.EE.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.

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Draw polygons with vertices at whole number coordinates in the coordinate plane	6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
Draw types of angles (acute, obtuse, right)	4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
Find areas by composing or decomposing a shape	6.G.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
Given a true statement about two-dimensional figures, determine other statements that must be true	5.G.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.
Identify a polygon on a coordinate plane given the coordinates of the vertices	6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
Identify coordinates of points and plot points with whole number coordinates in the first quadrant of the coordinate plane in a real-world context	5.G.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.
Identify coordinates of points and plot points with whole number coordinates in the first quadrant of the coordinate plane without context	5.G.1 5.G.2	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). 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.
Know the meaning of the x- and y-coordinates used to plot points on a coordinate grid	5.G.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).

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Know the process for plotting points with whole number coordinates in the first quadrant of the coordinate plane	5.G.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).
Recognize types of angles (acute, obtuse, right)	4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
Recognize types of angles (acute, obtuse, right) in a polygon	4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
Solve problems using a coordinate plane (quadrant I only)	5.G.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.
Understand that a characteristic of a category of shapes applies to all subcategories of the category	5.G.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

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Consistently find the missing side length of a rectangle given one side length and the area or perimeter	4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
Consistently solve real-world problems requiring conversion of units within the same system	5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
Count data points in a line plot to answer questions	6.SP.4	Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
Create line plots from given data sets and explain simple characteristics	5.MD.2 6.SP.4	Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
Describe data sets using measures of center and measures of variation	6.SP.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.
Extend the idea of using unit squares to find areas of rectangles to using unit cubes to find volumes of rectangular prisms	5.MD.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (5.MD.3a, 5.MD.3b)

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Extend the use of measuring tools to include measuring angles with protractors	4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
Find an unknown angle in a diagram of adjacent angles	4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
Find the volume of a rectangular prism when each dimension is shown with unit cubes	5.MD.5	Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. (5.MD.5a, 5.MD.5b, 5.MD.5c)
Inconsistently find the missing side length of a rectangle given one side length and the area or perimeter	4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
Inconsistently solve real-world problems requiring conversion of units within the same system	4.MD.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.
Make change	4.MD.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.
Perform calculations with data presented in line plots	5.MD.2	Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots.
Recognize a one-degree angle as an angle that turns through $\frac{1}{360}$ of a circle	4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: (4.MD.5a, 4.MD.5b)
Recognize measures of center and variability	6.SP.3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
Recognize statistical questions	6.SP.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
Understand angle measure as the number of one-degree angles an angle turns through	4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: (4.MD.5a, 4.MD.5b)

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call 800.538.9547 or visit www.TABEtest.com.**

