



IXL Skill Plan for the TABE[®] Math Level D



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www.ixl.com/math/skill-plans/tabe-math-level-d

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Geometry

| Standard | IXL skills |
|---|---|
| Plot points and draw polygons with integer coordinates in the coordinate plane | 1. Graph triangles and quadrilaterals MEZ |
| Use the formulas for the area and circumference of circles to solve problems | 1. Area of circles YA8 2. Circumference of circles KS7 3. Circles: word problems P56 |
| Solve problems involving adding and subtracting areas of rectangles | 1. Area between two shapes RKC 2. Area of compound figures 76U |
| Solve problems involving adding and subtracting areas of rectangles with fractional side lengths | |
| Explore the effects of simple transformations (90 or 180 degree rotations, reflections, and translations) on common plane figures | 1. Identify reflections, rotations, and translations UYL |
| Explore the effects of simple series of transformations on common figures on and off the coordinate plane | 1. Describe a sequence of transformations XPK |
| Write and solve simple, single-step equations to find unknown angle measures in given diagrams | 1. Find measures of complementary, supplementary, vertical, and adjacent angles CST |
| Use the Pythagorean theorem to find missing side lengths of right triangles both on and off the coordinate plane | 1. Pythagorean theorem: find the missing leg length Y9C 2. Pythagorean theorem: find the missing leg or hypotenuse length MTM 3. Pythagorean theorem: word problems 87U |
| Recognize and use right triangles drawn in the coordinate plane to solve problems | 1. Find the distance between two points ZBP |
| Recognize when to use (and use) the Pythagorean theorem to find the lengths of line segments on the coordinate plane | 1. Find the distance between two points ZBP |

Expressions and Equations

| Standard | IXL skills |
|---|--|
| Solve equations involving square and cube roots of perfect squares and cubes | <p>Square roots</p> <ol style="list-style-type: none"> 1. Square roots of perfect squares 9RS 2. Solve equations using square roots NNA <p>Cube roots</p> <ol style="list-style-type: none"> 3. Cube roots of positive perfect cubes RYG 4. Solve equations using cube roots TQ5 |
| Use properties of operations and exponents to justify steps in solving an equation | <ol style="list-style-type: none"> 1. Solve equations using properties XSC |
| Write or solve expressions and equations involving the distributive property and combining like terms | <ol style="list-style-type: none"> 1. Solve two-step equations QEB 2. Solve equations involving like terms VSW 3. Write and solve equations that represent diagrams FVH |
| Express very large and very small numbers in scientific notation | <ol style="list-style-type: none"> 1. Convert between standard and scientific notation H8A 2. Compare numbers written in scientific notation RHT |
| Write and solve linear equations and inequalities involving rational numbers in any form (e.g., fractions, decimals) and requiring the use of the distributive property and/or combining like terms | <ol style="list-style-type: none"> 1. Solve one-step inequalities QWH 2. Solve two-step inequalities XGQ |
| Write linear equations to represent real-world situations | <ol style="list-style-type: none"> 1. Solve equations: word problems D2Y 2. Solve word problems involving two-variable equations YJT |
| Write linear equations involving rational numbers in any form (e.g., fractions, decimals) to represent real-world situations | |
| Represent equations of lines by graphing them on the coordinate plane | <ol style="list-style-type: none"> 1. Graph proportional relationships and find the slope MQD |

Identify graphs of linear equations, including those represented by equations and word descriptions of real-world situations

1. Identify linear and nonlinear functions: graphs and equations [XB8](#)

Create graphs of linear equations, including those represented by equations and word descriptions of real-world situations, using appropriate axis labels and scales

1. Graph a line from an equation in slope-intercept form [W5E](#)
2. Graph a line using slope [FSV](#)

Graph systems of linear equations and find the point of intersection to approximate the solution

1. Is (x, y) a solution to the system of equations? [N46](#)
2. Solve a system of equations by graphing [WV5](#)

Write and solve systems of equations to represent real-world situations

1. Solve a system of equations by graphing: word problems [W9J](#)
2. Solve a system of equations using substitution: word problems [9M8](#)
3. Solve a system of equations using elimination: word problems [Z97](#)
4. Solve a system of equations using any method: word problems [VHE](#)

Ratios and Proportional Relationships

| Standard | IXL skills |
|---|--|
| Identify the constant of proportionality (or unit rate) associated with ratios of whole numbers | <ol style="list-style-type: none"> 1. Find the constant of proportionality from a table LKZ 2. Find the constant of proportionality from a graph ZUT |
| Identify the constant of proportionality (or unit rate) associated with ratios of whole numbers and fractions | <ol style="list-style-type: none"> 1. Calculate unit rates with fractions 57X |
| Find missing values of tables with equivalent ratios | <ol style="list-style-type: none"> 1. Ratio tables PPF |
| Find missing values in tables that represent proportional relationships with context | |
| Use ratio language to describe a ratio relationship between two quantities | <ol style="list-style-type: none"> 1. Identify equivalent ratios 2LM 2. Equivalent ratios: word problems RLZ 3. Ratios and rates: word problems ZB9 |
| Plot pairs of values from tables on a coordinate grid | <ol style="list-style-type: none"> 1. Ratios and rates: complete a table and make a graph 6Z2 |
| Plot pairs of values from tables on a coordinate grid to represent real-world, proportional relationships | <ol style="list-style-type: none"> 1. Ratios and rates: complete a table and make a graph 6Z2 |
| Interpret the meaning of a point on the graph of a proportional relationship in context | <ol style="list-style-type: none"> 1. Interpret graphs of proportional relationships RMH |
| Use proportional relationships to solve simple problems (e.g., gratuities, fees, tax, commissions, etc.) | <p>Percent word problems</p> <ol style="list-style-type: none"> 1. Percent of a number: tax, discount, and more SPN 2. Find the percent: tax, discount, and more PBM 3. Solve percent equations: word problems JS6 4. Multi-step problems with percents ZHX <p>Percent of change</p> <ol style="list-style-type: none"> 5. Percent of change: word problems 54S |

6. Percent of change: find the original amount word problems RCM
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Statistics and Probability

| Standard | IXL skills |
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| Describe patterns of association between two quantities represented in scatter plots of bivariate data (e.g., linear, increasing, outliers, clustering, etc.) | <ol style="list-style-type: none"> 1. Identify trends with scatter plots GZE 2. Outliers in scatter plots RP8 |
| Create scatter plots for bivariate data sets and draw lines of best fit to model linear relationships between the variables | <ol style="list-style-type: none"> 1. Scatter plots: line of best fit ZQ6 |
| Find a measure of center and variability of a given data set | <ol style="list-style-type: none"> 1. Calculate mean, median, mode, and range ZZK 2. Calculate mean absolute deviation JUV 3. Calculate quartiles and interquartile range MNV 4. Interpret charts and graphs to find mean, median, mode, and range 2WK |
| Use measures of center and variability of given data sets, represented in multiple ways, to draw comparative inferences | <ol style="list-style-type: none"> 1. Changes in mean, median, mode, and range 9UP |
| Use measures of center and variability of given data sets to draw inferences | <ol style="list-style-type: none"> 1. Interpret charts and graphs to find mean, median, mode, and range CYK 2. Mean, median, mode, and range: find the missing number ZWS |
| Use random data to approximate the probability of a chance event | <ol style="list-style-type: none"> 1. Experimental probability 9AA |
| Find the probability of a simple event | <ol style="list-style-type: none"> 1. Probability of simple events ZZB |
| Create and use information presented in two-way tables to solve simple problems | <ol style="list-style-type: none"> 1. Find probabilities using two-way frequency tables CRV |
| Create multiple representations of sample spaces of compound events (e.g., lists, diagrams, simulation) and use them to find probabilities | <ol style="list-style-type: none"> 1. Compound events: find the number of outcomes HZR |

Use basic probability models to simulate events and generate random data (e.g., using spinners, rolling dice, flipping coins, etc.)

1. Probability of simple events and opposite events F88

Use basic probability models to simulate compound events and generate random data

1. Probability of compound events YPQ

Number System

| Standard | IXL skills |
|--|---|
| Represent real-world situations with rational numbers | <ol style="list-style-type: none"> Add, subtract, multiply, or divide two fractions: word problems RDY Understanding fractions: word problems SG9 |
| Represent real-world situations with positive and negative integers | <ol style="list-style-type: none"> Understanding integers 8EP |
| Identify and create multiple representations of positive and negative integers and rational numbers | <ol style="list-style-type: none"> Rational numbers: find the sign V2E |
| Identify and represent positive and negative integers on a number line | <ol style="list-style-type: none"> Integers on number lines K6J Graph integers on horizontal and vertical number lines 36C |
| Solve one-step problems involving operations with positive and negative integers and represent the operations on a number line | <ol style="list-style-type: none"> Add integers using number lines L95 Subtract integers using number lines EW2 |
| Identify and represent rational numbers on a number line | <ol style="list-style-type: none"> Decimal number lines AXN Rational numbers on number lines DJE |
| Identify and represent approximations of irrational numbers on a number line | |
| Identify and represent the absolute values and opposites of numbers on a number line | <ol style="list-style-type: none"> Understanding absolute value TLR Understanding opposite integers X8L |
| Represent polygons with vertices at given coordinates on a coordinate grid | <ol style="list-style-type: none"> Graph triangles and quadrilaterals E55 |
| Create polygons on the coordinate grid having specified characteristics (e.g., area, perimeter) | <ol style="list-style-type: none"> Area and perimeter of squares and rectangles on the coordinate plane UCD |
| Solve one-step problems, with and without context, involving operations with positive and negative integers | <p>Addition and subtraction</p> <ol style="list-style-type: none"> Add integers QFU Subtract integers HEU |

3. Add and subtract integers FNS
4. Complete addition and subtraction equations with integers P6A
5. Add and subtract integers: word problems 2DD

Multiplication and division

6. Multiply integers DQT
7. Divide integers CTV
8. Multiply and divide integers R8D
9. Complete multiplication and division equations with integers K94

Mixed operations

10. Add, subtract, multiply, and divide integers B8A

Solve multi-step problems involving positive rational numbers

1. Multi-step word problems JVU
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Functions

| Standard | IXL skills |
|---|--|
| Identify graphs of functions that are linear and nonlinear | 1. Identify linear and nonlinear functions: graphs and equations XB8 |
| Identify equations of functions that are linear and nonlinear | 1. Identify linear and nonlinear functions: graphs and equations XB8 |
| Create input-output tables to represent functions | 1. Complete a table for a linear function D9B 2. Complete a table for a function graph 7EK |
| Identify the rate of change of a linear function represented by a table | 1. Find the slope from two points ZAC |
| Identify and create the equation of a linear function represented by a table | 1. Write a linear equation from two points 2R9 2. Write a linear function from a table UYY 3. Write equations for proportional relationships from tables S69 |
| Identify and create examples and non-examples of functions | 1. Identify functions ELJ 2. Identify functions: graphs AEB |
| Create and use graphs of linear functions to represent real-world situations | |
| Create equations, tables, and graphs to represent linear functions with given rates of change | <p>Write equations and functions</p> 1. Write linear functions: word problems YK6 2. Write a linear equation from a slope and y-intercept WHP 3. Write a linear equation from a slope and a point VKP |
| | <p>Graph equations and functions</p> 4. Graph a line using slope FSV 5. Graph a line from an equation in slope-intercept form W5E |
| Identify simple characteristics of graphs of functions (e.g., increasing, linear, etc.) | |

Identify simple characteristics of different intervals of graphs of functions, with and without context
