



IXL Skill Plan for the ACT[®] Aspire Early High School



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Emerging

Number and Quantity

Standard	IXL skills
Approximate irrational numbers	1. Estimate positive and negative square roots 96T

Algebra

Standard	IXL skills
Rewrite linear equations in slope-intercept form	1. Linear equations: solve for y T5F
Perform operations on monomials	1. Multiply monomials 52N 2. Divide monomials B48 3. Multiply and divide monomials 48P
Write one-variable equations to represent real-world problems	1. Solve linear equations: word problems UFG
Verify solutions to absolute value inequalities	
Verify solutions to systems of equations	1. Is (x, y) a solution to the system of equations? LRL
Rewrite powers of monomials	1. Powers of monomials 7Q8
Find square roots of perfect squares	1. Square roots of perfect squares 9RS
Find cube roots of perfect cubes	1. Cube roots of positive perfect cubes RYG 2. Cube roots of positive and negative perfect cubes J7K
Convert between standard and scientific notation	1. Convert between standard and scientific notation 7DX
Use properties to rewrite numerical expressions	1. Properties of addition and multiplication TQS 2. Evaluate numerical expressions involving integers ZFX

Functions

Standard	IXL skills
Identify key features of graphs	1. Characteristics of quadratic functions: graphs HW8
Construct functions using function notation	
Recognize situations that have linear relationships	1. Identify linear functions from graphs and equations VMQ 2. Identify linear functions from tables F5G
Write linear functions from tables	1. Slope-intercept form: write an equation from a table SSE
Use linear functions to solve problems	1. Write linear functions: word problems 9RQ
Identify positive and negative slopes	
Graph linear equations and systems of linear equations	1. Graph a proportional relationship DAQ 2. Slope-intercept form: graph an equation UWB 3. Solve a system of equations by graphing TSS
Identify characteristics of linear equations from graphs	1. Find the constant of variation 9TD 2. Find the slope of a graph E7D

Geometry

Standard	IXL skills
Use angle-angle similarity to identify similar triangles	
Understand characteristics of circles	1. Parts of a circle KZB
Find the midpoint of a line segment on the coordinate plane	1. Midpoint formula: find the midpoint UQE
Recognize equations of circles centered at the origin	1. Graph circles centered at the origin GNJ

Find the volume of cylinders, cones, pyramids, and spheres

1. Volume of cubes, prisms, and pyramids JUB
2. Volume of cylinders 9F3
3. Volume of cones YXR
4. Volume of spheres QX7

Translate points in the coordinate plane

1. Translations: graph the image XUS
2. Translations: find the coordinates RUP

Find scale factors

1. Dilations and scale factors RT5

Recognize that corresponding angles in similar figures are congruent

1. Similar figures: side lengths and angle measures EJ2

Recognize translations, reflections, rotations, and dilations

1. Identify reflections, rotations, and translations UYL

Construct arguments using objects, drawings, and diagrams

1. Use Venn diagrams to solve problems BZF

Statistics and Probability

Standard
IXL skills
Understand that estimates based on sample data are approximate

1. Estimate population size using proportions ZNB

Use experimental data to informally evaluate differences between population parameters
Identify positive and negative association in scatterplots

1. Interpret a scatter plot 8BS

Create stem-and-leaf plots and scatter plots

1. Create stem-and-leaf plots PN9
2. Create scatter plots AVL

Modeling

Standard	IXL skills
Write linear equations to model relationships in tables and graphs	<ol style="list-style-type: none"> 1. Slope-intercept form: write an equation from a graph 9GW 2. Slope-intercept form: write an equation from a table SSE

Justification and Explanation

Standard	IXL skills
Prepare to write proofs	
Explain procedures	
Provide counterexamples	<ol style="list-style-type: none"> 1. Counterexamples TMQ
Use patterns to draw conclusions	<ol style="list-style-type: none"> 1. Identify arithmetic and geometric sequences X76
Use conditional statements, models, or computations to draw conclusions	<ol style="list-style-type: none"> 1. Conditionals VU9
Support claims and draw conclusions	<ol style="list-style-type: none"> 1. Interpret bar graphs, line graphs, and histograms B9A

Integrating Essential Skills

Standard	IXL skills
Solve problems with decimals, fractions, exponents, and counting techniques	<p>Calculations with decimals and fractions</p> <ol style="list-style-type: none"> 1. Unit prices JHA 2. Evaluate numerical expressions involving rational numbers 8CU 3. Multi-step problems with percents HBJ <p>Proportional reasoning</p> <ol style="list-style-type: none"> 4. Solve proportions: word problems 8ES <p>Exponents</p> <ol style="list-style-type: none"> 5. Exponents with integer bases EJ8

6. Exponents with decimal and fractional bases 7SS

Counting techniques

7. Counting principle GTX

Understand definitions and properties of simple geometric shapes

Two-dimensional shapes

1. Polygon vocabulary KHQ
2. Classify triangles TNN
3. Classify quadrilaterals I 86L
4. Classify quadrilaterals II MVK

Three-dimensional shapes

5. Parts of three-dimensional figures VW9
6. Three-dimensional figure vocabulary NKH
7. Nets and drawings of three-dimensional figures PKE

Apply simple theorems about angles

1. Find measures of complementary, supplementary, vertical, and adjacent angles VZU

Explain the concepts of area and volume

1. Area LLC
2. Volume BK9
3. Surface area VGT

Use different representations of data

1. Interpret bar graphs, line graphs, and histograms B9A
2. Create bar graphs, line graphs, and histograms EF6

Find probabilities using uniform probability models

1. Theoretical probability 2MS

Use samples to draw conclusions about populations

1. Estimate population size using proportions ZNB

Apply quantitative reasoning

Scale drawings

1. Scale drawings: word problems 8B7

Unit conversions

2. Convert rates and measurements: customary units TXC

3. Convert rates and measurements: metric units 6W2
4. Unit prices with unit conversions LT6

Find measures of central tendency and create histograms

1. Mean, median, mode, and range MHB
 2. Create histograms WZU
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Close

Number and Quantity

Standard	IXL skills
Compare and order rational and irrational numbers	1. Compare and order rational numbers ALW

Algebra

Standard	IXL skills
Interpret the meaning of parameters in real-world problems	1. Solve linear equations: word problems UFG
Rewrite rational expressions to use positive exponents	1. Division with exponents 9SS 2. Divide monomials B48
Identify the zeros of factored polynomials	1. Solve a quadratic equation using the zero product property TNM
Solve equations using square roots	1. Solve equations using square roots NNA
Solve equations using cube roots	1. Solve equations using cube roots TQ5
Create quadratic equations to represent a real-world problems	
Write quadratic functions from their zeros	1. Find the roots of factored quadratic functions CXC
Verify solutions to compound inequalities	
Rearrange linear formulas to highlight specific single-variable quantities	1. Rearrange multi-variable equations WSJ
Solve and graph single-variable inequalities	Two-step inequalities 1. Solve two-step linear inequalities NPZ 2. Graph solutions to two-step linear inequalities XVM

Advanced inequalities

3. Solve advanced linear inequalities 9K8
4. Graph solutions to advanced linear inequalities 5GC

Graph two-variable linear inequalities

1. Graph a two-variable linear inequality HHP

Solve linear equations

1. Solve two-step linear equations QAK
2. Solve advanced linear equations 28N
3. Solve equations with variables on both sides 7S7

Graph linear equations

1. Slope-intercept form: graph an equation UWB
2. Standard form: graph an equation U6U
3. Point-slope form: graph an equation F8H

Approximate and solve systems of equations by graphing and verify solutions using any method

1. Solve a system of equations by graphing TSS
2. Is (x, y) a solution to the system of equations? LRL

Understand when systems of equations have no solution or infinitely many solutions

1. Find the number of solutions to a system of equations by graphing HJW

Strategically rewrite monomials**Functions****Standard****IXL skills****Evaluate functions**

1. Evaluate a function R96
2. Complete a function table from an equation Z73

Use function notation and definitions about functions**Identify functions**

1. Identify functions VLL
2. Identify functions: vertical line test HLX

Use function notation

3. Complete a function table from a graph HXF

Match quadratic functions and graphs

1. Match quadratic functions and graphs AU8

Find inverses of linear functions

1. Find the inverse of a function VME

Recognize situations that can be represented with exponential models

1. Identify linear and exponential functions from graphs UEC
2. Identify linear and exponential functions from tables LZF

Represent problems using graphs of linear functions
Calculate slope

1. Find the slope of a graph E7D
2. Find the slope from two points MD5

Identify zero or undefined slope

Geometry

Standard
IXL skills
Use congruence theorems

1. Identify congruent figures HU9
2. SSS and SAS Theorems 48Q
3. ASA and AAS Theorems N94

Identify corresponding parts of similar triangles

1. Similarity statements UG8
2. Similarity rules for triangles XJQ

Understand and explain that all circles are similar using dilation and translation

1. Similarity of circles NEP

Understand the parameters of equations of circles centered at the origin

1. Graph circles centered at the origin GNJ

Use slope to identify parallel and perpendicular lines

1. Slopes of parallel and perpendicular lines ADB

Understand volume of prisms as equal to area of base times height, for any shaped base

1. Volume of prisms and cylinders N5F

Rotate points 180° about a center

1. Rotations: graph the image AC9
2. Rotations: find the coordinates HHS

Reflect figures over the x- or y-axis

1. Reflections over the x- and y-axes: graph the image 74Z

2. Reflections over the x- and y-axes: find the coordinates 5UM

Rotate figures about the origin

1. Rotations: graph the image 6SD
2. Rotations: find the coordinates ZX5

Find measures of angles formed when parallel lines are cut by a transversal

1. Transversals of parallel lines: find angle measures WB9

Construct arguments, state assumptions, and provide counterexamples

1. Identify hypotheses and conclusions 7FW
2. Counterexamples 2GJ

Statistics and Probability

Standard

IXL skills

Compare experimental data and predictions

1. Make predictions 38C

Explain independent events

1. Identify independent and dependent events 5A7

Identify independent and dependent variables and related situations

1. Identify independent and dependent variables N55

Relate scatter plots to data sets or descriptions

1. Create scatter plots AVL

Estimate lines of best fit

1. Scatter plots: line of best fit Y2S

Modeling

Standard

IXL skills

Model real-world problems using linear equations and interpret graphs of the models

1. Interpret the graph of a function: word problems STU
2. Slope-intercept form: write an equation from a word problem HWM

Justification and Explanation

Standard	IXL skills
Justify conclusions by verifying claims, explaining errors in reasoning, and providing counterexamples	1. Converse of the Pythagorean theorem NCK
Use definitions about functions	1. Identify functions VLL 2. Identify functions: vertical line test HLX

Integrating Essential Skills

Standard	IXL skills
Find probabilities of compound events	1. Outcomes of compound events GKA 2. Probability of independent and dependent events WRJ
Convert between measurement units and systems	1. Convert between customary and metric systems KQ9 2. Convert rates and measurements: customary units TXC 3. Convert rates and measurements: metric units 6W2
Apply quantitative reasoning	1. Multi-step problems with unit conversions EHV 2. Scale drawings: word problems M7M

Ready

Number and Quantity

Standard	IXL skills
Simplify radicals	1. Simplify square roots WFY
Add and subtract radicals	1. Add and subtract multiples of the same radical RWD
Multiply and divide radicals	
Evaluate and rewrite expressions with rational exponents	<p>Evaluate expressions</p> <p>1. Evaluate integers raised to positive rational exponents KT5</p> <p>2. Evaluate integers raised to rational exponents PQH</p> <p>Rewrite expressions</p> <p>3. Multiplication with rational exponents YG7</p> <p>4. Division with rational exponents H47</p> <p>5. Power rule with rational exponents QF8</p> <p>6. Simplify expressions involving rational exponents 89Q</p>
Use units to understand and solve multi-step problems	1. Multi-step problems with unit conversions EHV
Classify square roots as rational or irrational	1. Classify rational and irrational numbers 3S8

Algebra

Standard	IXL skills
Use the structure of expressions to rewrite them	<p>1. Multiply two binomials: special cases 9JN</p> <p>2. Factor out a monomial JZL</p> <p>3. Factor quadratics: special cases 56E</p>
Interpret parts of expressions	1. Sort factors of variable expressions ML9

Add and subtract polynomials

1. Add and subtract polynomials using algebra tiles J7V
2. Add and subtract polynomials 5EK
3. Add polynomials to find perimeter 8AS

Multiply binomials

1. Multiply a polynomial by a monomial G2G
2. Multiply two polynomials using algebra tiles WR5
3. Multiply two binomials M7Q

Factor quadratics

1. Factor quadratics using algebra tiles Y6U
2. Factor quadratics with leading coefficient 1 S9P
3. Factor quadratics with other leading coefficients 7ED

Rewrite rational expressions using positive and negative exponents

1. Divide monomials B48

Write quadratic and polynomial equations using zeros and other graphical information

1. Write a quadratic function from its zeroes N2S
2. Write a quadratic function from its vertex and another point YGV

Write systems of equations to represent real-world problems**Solve equations using square roots**

1. Solve equations using square roots NNA

Rearrange formulas to highlight specific quantities

1. Rearrange multi-variable equations WSJ

Solve and graph solutions to absolute value inequalities

1. Solve absolute value inequalities HXH
2. Graph solutions to absolute value inequalities NE9

Solve systems of linear equations

1. Solve a system of equations by graphing TSS
2. Solve a system of equations using substitution 8P9
3. Solve a system of equations using elimination A48

Graph solutions to systems of linear inequalities

1. Solve systems of linear inequalities by graphing SGH

Understand solutions to a system of equations

1. Find the number of solutions to a system of equations by graphing HJW

Apply properties of equality to solve equations

1. Properties of equality H8Q

Perform operations with numbers in scientific notation

1. Add and subtract numbers written in scientific notation VJL
2. Multiply numbers written in scientific notation TPB
3. Divide numbers written in scientific notation PY5

Strategically rewrite polynomials

1. Multiply two binomials: special cases 9JN

Functions**Standard****IXL skills****Find the average rate of change**

1. Rate of change: tables PLA
2. Rate of change: graphs BNH

Use graphs to find the average rate of change over intervals in nonlinear functions**Identify domain and range**

1. Domain and range of exponential functions: graphs ANC
2. Domain and range of absolute value functions: graphs NV7
3. Domain and range of radical functions: graphs UXG

Use formulas for geometric sequences

1. Write variable expressions for geometric sequences XPC

Combine functions

1. Add and subtract functions 45B
2. Multiply functions 8PM

Find inverses of linear functions

1. Find the inverse of a function VME

Understand translations of functions

1. Translations of functions L92

Identify situations that can be modeled with quadratic relationships

Identify functions

1. Identify functions VLL
2. Identify functions: vertical line test HLX

Understand slope as a constant rate of change

1. Slopes of lines V2T

Attend to precision

1. Interpret functions using everyday language U98
2. Slope-intercept form: find the slope and y-intercept R5T
3. Slope-intercept form: write an equation from a word problem HWM

Geometry**Standard****IXL skills****Describe congruence transformations**

1. Sequences of congruence transformations: graph the image WHW
2. Transformations that carry a polygon onto itself RJW
3. Congruence transformations: mixed review XQ7

Perform basic constructions**Midpoints**

1. Construct the midpoint or perpendicular bisector of a segment HDT

Angles

2. Construct an angle bisector FHL
3. Construct a congruent angle F7V

Lines

4. Construct a perpendicular line BZR
5. Construct parallel lines 6EB

Polygons

6. Construct an equilateral triangle or regular hexagon USF
7. Construct a square QQZ

Find unknown side lengths in similar triangles

1. Side lengths and angle measures in similar figures E2K
2. Similar triangles and indirect measurement JWK

Recognize dilations of polygons	1. Dilations: graph the image ZRD
Identify and use relationships in circles	1. Parts of a circle 4X2 2. Central angles and arc measures VZX 3. Arcs and chords P63 4. Inscribed angles 98U
Graph circles from equations	1. Graph circles from equations in standard form GVH
Apply similarity and congruence criteria on the coordinate plane	1. SSS Theorem in the coordinate plane C5G
Identify and write equations to represent parallel and perpendicular lines	1. Write an equation for a parallel or perpendicular line 5SH 2. Slopes of parallel and perpendicular lines ADB
Find the volume of prisms and cylinders with irregular bases	1. Volume of prisms and cylinders N5F
Solve real-world problems involving area and volume	1. Area and perimeter: word problems EFA
Use the Pythagorean theorem to find missing side lengths	1. Pythagorean theorem KKT
Make and support conjectures about angle relationships when parallel lines are cut by a transversal	1. Proofs involving parallel lines I CUV
Find distances between two points on the coordinate plane using the Pythagorean theorem	1. Distance formula 59F
Construct simple proofs	1. Proofs involving angles HV9 2. Proofs involving corresponding parts of congruent triangles AKL 3. Prove proportions or angle congruences using similarity DDY 4. Prove the Pythagorean theorem JGT

Statistics and Probability

Standard	IXL skills
Compare summary statistics for two different data sets	<ol style="list-style-type: none"> 1. Mean, median, mode, and range MHB 2. Calculate quartiles and interquartile range 8H9
Analyze sample surveys, experimental studies, and observational studies	<ol style="list-style-type: none"> 1. Identify biased samples F6N
Identify independent events and find the joint probability of two independent events	<ol style="list-style-type: none"> 1. Identify independent events 5P6 2. Independence and conditional probability JR7
Find conditional probabilities from two-way tables	<ol style="list-style-type: none"> 1. Find conditional probabilities using two-way frequency tables A6N
Create and use linear models to solve problems involving data sets or scatter plots and interpret models in context	<ol style="list-style-type: none"> 1. Find the equation of a regression line WJC 2. Interpret regression lines SEQ 3. Analyze a regression line of a data set 8D8

Modeling

Standard	IXL skills
Write systems of equations to represent real-world problems	<ol style="list-style-type: none"> 1. Solve a system of equations by graphing: word problems BVB 2. Solve a system of equations using substitution: word problems US9 3. Solve a system of equations using elimination: word problems NHR

Justification and Explanation

Standard	IXL skills
Support claims with evidence and clear solution paths	<p>Equations</p> <ol style="list-style-type: none"> 1. Solve equations: complete the solution EVP <p>Proofs</p> <ol style="list-style-type: none"> 2. Proofs involving angles HV9 3. Proofs involving corresponding parts of congruent triangles AKL

4. Prove proportions or angle congruences using similarity DDY
5. Prove the Pythagorean theorem JGT

Integrating Essential Skills

Standard	IXL skills
Perform operations with rational expressions	<ol style="list-style-type: none"> 1. Simplify complex fractions HYL 2. Simplify rational expressions Q7U 3. Multiply and divide rational expressions LX9
Interpret data distributions	<ol style="list-style-type: none"> 1. Interpret line plots PXN 2. Interpret histograms 2QR 3. Interpret stem-and-leaf plots EBJ 4. Box plots YE9
Understand the role of random sampling for surveys	<ol style="list-style-type: none"> 1. Identify biased samples F6N
Reason quantitatively and attend to meaning when solving problems	<p>Rates and measurements</p> <ol style="list-style-type: none"> 1. Convert rates and measurements: customary units LSC 2. Convert rates and measurements: metric units XZD <p>Area and perimeter</p> <ol style="list-style-type: none"> 3. Area and perimeter of similar figures 6J7 4. Perimeter and area: changes in scale ETV <p>Surface area and volume</p> <ol style="list-style-type: none"> 5. Similar solids: find the missing length UT7 6. Surface area and volume of similar solids N9X 7. Surface area and volume: changes in scale T9H

Exceeding

Number and Quantity

Standard	IXL skills
Evaluate radical expressions	1. Evaluate variable expressions involving integers AZT
Rewrite radical expressions	1. Simplify radical expressions ZFF 2. Simplify radical expressions involving fractions VRZ 3. Add and subtract radical expressions DLV 4. Simplify radical expressions using the distributive property 28V 5. Divide radical expressions TYC
Round results according to measurement precision	1. Precision M5E 2. Greatest possible error FLJ 3. Minimum and maximum area and volume VX7

Algebra

Standard	IXL skills
Produce and use equivalent forms of expressions	Factor expressions 1. Factor quadratics with leading coefficient 1 S9P 2. Factor quadratics with other leading coefficients 7ED 3. Factor quadratics: special cases 56E Complete the square 4. Complete the square RD2 5. Write a quadratic function in vertex form W2Q
Apply the Remainder Theorem	1. Find the roots of factored polynomials PVM
Divide polynomials by inspection or long division	1. Divide polynomials by monomials 72C 2. Divide polynomials using long division LY7
Multiply trinomials	1. Multiply polynomials 58A

Create different polynomials from the same list of zeros

Use quadratic, rational, or exponential equations to represent real-world problems including motion paths of objects acted on by gravity

1. Exponential growth and decay: word problems UKG
2. Compound interest: word problems QSF

Solve absolute value equations using cases

1. Solve absolute value equations 9LF
2. Graph solutions to absolute value equations KXA

Solve systems of linear and quadratic equations

1. Systems of linear and quadratic equations 4U9

Understand the zero property of multiplication

1. Properties of addition and multiplication TQS
2. Solve a quadratic equation using the zero product property TNM

Understand extraneous solutions may arise when solving radical equations by squaring both sides

1. Solve radical equations I MMG
2. Solve radical equations II ZGH

Solve real-world problems with numbers in scientific notation

Use efficient strategies to solve equations and systems of equations and rewrite polynomials

Systems of linear equations

1. Solve a system of equations using any method HLV

Rational equations

2. Solve rational equations VLW

Quadratic equations

3. Solve a quadratic equation using square roots ERF
4. Solve a quadratic equation by factoring CSS
5. Solve a quadratic equation by completing the square XCL
6. Solve a quadratic equation using the quadratic formula XCF

Polynomial expressions

7. Factor polynomials TAH

Functions

Standard	IXL skills
Understand how x-intercepts relate to the zeros of quadratic functions	<ol style="list-style-type: none"> Solve a quadratic equation using the zero product property TNM Match quadratic functions and graphs AU8
Relate graphs to real-world scenarios	
Identify outputs of quadratic functions	<ol style="list-style-type: none"> Complete a function table: quadratic functions LFV
Write explicit and recursive formulas for arithmetic and geometric sequences	<ol style="list-style-type: none"> Write variable expressions for arithmetic sequences 5VF Write variable expressions for geometric sequences XPC Write a formula for a recursive sequence KP9
Understand function notation for transformations and how translations, reflections, and dilations change the graphs of functions	<ol style="list-style-type: none"> Function transformation rules ZEG Translations of functions L92 Reflections of functions KD2 Dilations of functions 6EC Transformations of functions AAB Describe function transformations ZRR
Construct exponential or quadratic models from graphs, tables and verbal descriptions	<p>Exponential functions</p> <ol style="list-style-type: none"> Match exponential functions and graphs 72J <p>Quadratic functions</p> <ol style="list-style-type: none"> Match quadratic functions and graphs AU8 Write a quadratic function from its vertex and another point YGV <p>Choose an appropriate model</p> <ol style="list-style-type: none"> Identify linear, quadratic, and exponential functions from graphs DHB Identify linear, quadratic, and exponential functions from tables SP5 Write linear, quadratic, and exponential functions AFA

Describe features of functions and apply understanding in context

Identify functions

1. Identify functions VLL
2. Identify functions: vertical line test HLX

Use function notation

3. Find values using function graphs QCG
4. Interpret functions using everyday language U98

Find domain and range

5. Domain and range of relations 2CG

Geometry

Standard	IXL skills
Use the congruence definition and congruence theorems	<ol style="list-style-type: none"> 1. Proving triangles congruent by SSS, SAS, ASA, and AAS SZL 2. Congruency in isosceles and equilateral triangles HPR 3. Proofs involving isosceles triangles V45
Complete proofs involving similar triangles	<ol style="list-style-type: none"> 1. Prove proportions or angle congruences using similarity DDY 2. Proofs involving similarity in right triangles XCT
Define trigonometric ratios	<ol style="list-style-type: none"> 1. Trigonometric ratios: sin, cos, and tan D5Z 2. Trigonometric ratios: csc, sec, and cot L8J 3. Trigonometric ratios in similar right triangles 7X7
Find arc lengths and areas of sectors	<ol style="list-style-type: none"> 1. Arc length 7L9 2. Area of sectors XZQ
Use the midpoint formula to find endpoints	<ol style="list-style-type: none"> 1. Midpoint formula: find the endpoint EUW
Use shapes, their measures, and properties to model real-world problems	<ol style="list-style-type: none"> 1. Area and perimeter: word problems EFA 2. Pythagorean theorem: word problems EU8
Make logical arguments and explain flawed reasoning	<ol style="list-style-type: none"> 1. Identify hypotheses and conclusions 7FW 2. Conditionals VU9 3. Negations VBY

4. Converses, inverses, and contrapositives N5P
5. Biconditionals Q6E

Statistics and Probability

Standard	IXL skills
Interpret differences in data distributions, taking into account outliers and context	<ol style="list-style-type: none"> 1. Box plots YE9 2. Identify an outlier 87L 3. Identify an outlier and describe the effect of removing it XGC
Plot and analyze residuals	
Understand the role of random sampling and random assignment to treatment groups	<ol style="list-style-type: none"> 1. Experiment design GSS
Describe and represent compound events	<ol style="list-style-type: none"> 1. Outcomes of compound events 82S

Modeling

Standard	IXL skills
Use graphs and diagrams to interpret real-world problems	<ol style="list-style-type: none"> 1. Solve a system of equations by graphing: word problems BVB 2. Find probabilities using two-way frequency tables TU9 3. Geometric probability KBK
Write quadratic equations and interpret graphs of quadratic functions in real-world problems	<ol style="list-style-type: none"> 1. Characteristics of quadratic functions: graphs HW8

Justification and Explanation

Standard	IXL skills
Thoroughly justify conclusions by explaining errors in reasoning and providing counterexamples	<ol style="list-style-type: none"> 1. Solve equations: complete the solution EVP

Use a variety of proof techniques

1. Proofs involving parallel lines II 5U8
2. Proofs involving triangles I G78
3. Proofs involving triangles II DUQ
4. Prove similarity statements ETX

Integrating Essential Skills**Standard****IXL skills**

Flexibly use a variety of methods to model and solve problems, attending to the meaning of quantities

1. Multi-step problems with unit conversions EHV
2. Calculate density, mass, and volume YKJ