



IXL Skill Plan for the ACT[®]

Math

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Score range 13-15

Number and quantity

ACT topic	IXL skills	
Whole numbers and decimals	5-D.3	Divide multi-digit numbers by 1-digit numbers >>
	6-A.5	Add and subtract whole numbers >>
	6-B.1	Multiply whole numbers >>
	6-C.5	Divide whole numbers - 2-digit divisors >>
	6-C.6	Divide whole numbers - 3-digit divisors >>
	7-E.1	Add and subtract decimals >>
	7-E.3	Multiply decimals >>
	7-E.5	Divide decimals >>
Equivalent fractions	4-P.5	Find equivalent fractions using area models >>
	4-P.6	Graph equivalent fractions on number lines >>
	4-P.9	Patterns of equivalent fractions >>
	5-K.5	Write fractions in lowest terms >>
	6-I.3	Equivalent fractions review >>
Positive rational numbers on number lines	2-A.8	Number lines - up to 1,000 >>
	6-I.1	Fractions on number lines >>
	7-D.3	Decimal number lines >>

Algebra and functions

ACT topic	IXL skills	
Word problems with whole numbers and money	6-U.3	Add and subtract money amounts: word problems >>
	6-U.5	Multiply money: word problems >>
	6-U.7	Divide money amounts: word problems >>
	7-M.1	Add, subtract, multiply, and divide money amounts: word problems >>
	7-M.2	Price lists >>
Introduction to expressions	5-V.1	Write variable expressions >>
	5-V.2	Write variable expressions: word problems >>
Solve simple equations	6-Z.6	Solve one-step equations with whole numbers >>
Arithmetic patterns	5-G.19	Number sequences involving decimals >>
	5-K.12	Arithmetic sequences with fractions >>

Geometry

ACT topic	IXL skills	
Lengths of line segments		
Measurement conversions	2-P.7	Exchanging money >>
	5-Y.1	Convert time units >>
	5-Z.6	Conversion tables - customary units >>
	5-Z.12	Conversion tables - metric units >>

Statistics and probability

ACT topic	IXL skills	
Introduction to mean	4-V.5	Find the mean >>
Introduction to charts and tables	4-J.1	Read a table >>

Score range 16-19

Number and quantity

ACT topic	IXL skills	
Factors	4-D.2	Multiplication facts up to 12: find the missing factor >>
	8-A.1	Factors >>
Place value	6-A.1	Place values in whole numbers >>
	6-F.2	Decimal place values >>
Rational numbers on number lines	6-I.1	Fractions on number lines >>
	7-B.2	Integers on number lines >>
	7-B.3	Graph integers on horizontal and vertical number lines >>
	7-D.3	Decimal number lines >>

Algebra and functions

ACT topic	IXL skills	
Arithmetic with rational numbers	6-G.4	Maps with decimal distances >>
	6-J.9	Maps with fractional distances >>
	6-O.1	Add, subtract, multiply, or divide two whole numbers >>
	6-R.9	Unit rates: word problems >>
	6-R.11	Solve the proportion >>
	7-E.1	Add and subtract decimals >>
	7-E.3	Multiply decimals >>
	7-E.5	Divide decimals >>
	7-G.1	Add and subtract fractions >>
	7-G.3	Add and subtract mixed numbers >>
	7-G.9	Multiply fractions >>
	7-G.12	Divide fractions >>
	7-L.5	Percents of numbers and money amounts >>

Qualitative descriptions of graphs

Definitions of whole number operations

Evaluate expressions with whole numbers	6-Y.3	Evaluate variable expressions with whole numbers >>
	6-Y.4	Evaluate multi-variable expressions >>

Solve one-step equations	A1-J.3	Solve one-step linear equations >>
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Combine like terms	8-V.14	Add and subtract like terms >>
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Geometric patterns	5-T.2	Complete a geometric number sequence >>
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Geometry

ACT topic	IXL skills	
Introduction to angles with parallel lines	G-D.3	Transversals: name angle pairs >>
Perimeter	5-EE.1	Perimeter with whole number side lengths >>
	5-EE.2	Perimeter with decimal side lengths >>
	5-EE.3	Perimeter with fractional side lengths >>
Area of rectangles	3-FF.10	Find the area of rectangles and squares >>
Introduction to coordinate planes	5-U.1	Objects on a coordinate plane >>
	5-U.2	Graph points on a coordinate plane >>

Statistics and probability

ACT topic	IXL skills	
Mean	5-X.2	Find the mean >>
Charts and tables	5-S.5	Price lists >>
	5-W.1	Read a table >>
	5-W.13	Frequency charts >>
Probability of an event and its complement		

Score range 20-23

Number and quantity

ACT topic	IXL skills	
Number concepts	7-D.2	Compare and order decimals >>
	8-A.1	Factors >>
	8-A.2	Divisibility rules >>
	8-A.3	Prime or composite >>
	8-A.4	Prime factorization >>
	8-A.5	Greatest common factor >>
	8-D.3	Round decimals and mixed numbers >>
	8-D.4	Convert between decimals and fractions or mixed numbers >>
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Powers of ten		
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Distance on number lines	G-B.2	Lengths of segments on number lines >>
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Absolute value	A1-A.2	Absolute value and opposites >>
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Distance in the coordinate plane	6-X.5	Distance between two points >>
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Matrix addition	A1-M.3	Add and subtract matrices >>
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Algebra and functions

ACT topic	IXL skills	
Rate and proportion problems	8-M.1	Multi-step word problems >>
	A1-C.5	Solve proportions >>
	A1-C.6	Solve proportions: word problems >>
	A1-C.7	Scale drawings: word problems >>
	A1-D.4	Percent of change >>
	A1-D.5	Percent of change: word problems >>
	A1-D.6	Percent of a number: tax, discount, and more >>
	A1-D.7	Find the percent: tax, discount, and more >>
Expressions in words and symbols	8-V.1	Write variable expressions >>
	8-W.2	Write an equation from words >>
Linear graph word problems		
Evaluate expressions with integers	8-V.4	Evaluate one-variable expressions >>
	8-V.5	Evaluate multi-variable expressions >>
	8-V.6	Evaluate absolute value expressions >>
Add and subtract expressions	8-V.14	Add and subtract like terms >>
Solve linear equations	A1-J.1	Model and solve equations using algebra tiles >>
	A1-J.2	Write and solve equations that represent diagrams >>
	A1-J.3	Solve one-step linear equations >>
	A1-J.4	Solve two-step linear equations >>
	A1-J.5	Solve advanced linear equations >>
	A1-J.6	Solve equations with variables on both sides >>
	A1-J.7	Solve equations: complete the solution >>
	A1-J.11	Solve linear equations: mixed review >>

Multiply binomials	A1-Z.8	Multiply two binomials >>
Graph inequalities on number lines	A1-K.1	Graph inequalities >>
Introduction to slope	8-Y.5	Graph a line using slope >>
Evaluate linear and quadratic functions	8-Z.6	Evaluate a linear function >>
	A1-S.13	Complete a table and graph a linear function >>
	A1-BB.2	Complete a function table: quadratic functions >>

Geometry

ACT topic	IXL skills	
Angles with parallel lines	G-D.4	Transversals of parallel lines: find angle measures >>
Angle properties	G-C.1	Angle vocabulary >>
	G-C.2	Angle measures >>
	G-C.3	Identify complementary, supplementary, vertical, adjacent, and congruent angles >>
Area and perimeter of triangles and rectangles	6-FF.2	Area of rectangles and squares >>
	6-FF.3	Area of triangles >>
Introduction to the Pythagorean theorem		
Introduction to geometric formulas	6-FF.2	Area of rectangles and squares >>
	6-FF.3	Area of triangles >>
	6-FF.14	Volume of cubes and rectangular prisms >>
	6-FF.15	Surface area of cubes and rectangular prisms >>
Coordinate plane	7-X.3	Translations: graph the image >>
	A1-G.1	Coordinate plane review >>

Statistics and probability

ACT topic	IXL skills	
Mean: find the missing value	5-X.6	Mean: find the missing number >>
Translate between types of graphs		
Introduction to probability	8-EE.1	Probability of simple events >>
Counting and combinations	6-II.5	Compound events - find the number of outcomes by counting >>
	8-EE.10	Counting principle >>

Score range 24-27

Number and quantity

ACT topic	IXL skills	
Order fractions	5-K.11	Put fractions in order >>
Least common multiple	8-A.6	Least common multiple >>
	8-A.7	GCF and LCM: word problems >>
	8-D.2	Least common denominator >>
Numeric factors	8-A.1	Factors >>
	8-A.7	GCF and LCM: word problems >>
	8-D.1	Write fractions in lowest terms >>
Introduction to complex numbers	A1-H.1	Introduction to complex numbers >>
Add and subtract matrices	A1-M.3	Add and subtract matrices >>

Algebra and functions

ACT topic	IXL skills	
Multi-step measurement problems	A1-E.1	Convert rates and measurements: customary units >>
	A1-E.2	Convert rates and measurements: metric units >>
	A1-E.3	Unit prices with unit conversions >>
	A1-O.4	Rate of travel: word problems >>
Write simple functions and equations	8-V.3	Write variable expressions: word problems >>
	8-Z.12	Write linear functions: word problems >>
	A1-C.6	Solve proportions: word problems >>
	A1-C.7	Scale drawings: word problems >>
	A1-S.12	Write linear functions to solve word problems >>

Graph linear equations	A1-S.6	Slope-intercept form: graph an equation >>
	A1-S.13	Complete a table and graph a linear function >>
	A1-S.17	Standard form: graph an equation >>
	A1-S.20	Point-slope form: graph an equation >>
Numbers in real-world contexts		
Linear equation word problems	8-V.2	Write variable expressions from diagrams >>
	8-Z.12	Write linear functions: word problems >>
	A1-J.10	Solve linear equations: word problems >>
	A1-S.12	Write linear functions to solve word problems >>
Solve simple linear inequalities	A1-K.4	Solve one-step linear inequalities: addition and subtraction >>
Graph compound inequalities on number lines	A1-K.12	Graph compound inequalities >>
Add, subtract, and multiply polynomials	A1-Z.3	Add and subtract polynomials using algebra tiles >>
	A1-Z.4	Add and subtract polynomials >>
	A1-Z.5	Add polynomials to find perimeter >>
	A1-Z.6	Multiply a polynomial by a monomial >>
	A1-Z.7	Multiply two polynomials using algebra tiles >>
	A1-Z.8	Multiply two binomials >>
	A1-Z.9	Multiply two binomials: special cases >>
	A1-Z.10	Multiply polynomials >>
Solve simple quadratic equations	A1-AA.3	Factor quadratics using algebra tiles >>
	A1-AA.4	Factor quadratics with leading coefficient 1 >>
	A1-AA.5	Factor quadratics with other leading coefficients >>
	A1-AA.6	Factor quadratics: special cases >>
	A1-BB.5	Solve a quadratic equation using square roots >>
	A1-BB.6	Solve a quadratic equation using the zero product property >>

Square roots	8-F.14	Square roots of perfect squares >>
	8-F.15	Positive and negative square roots >>
	8-F.16	Estimate positive and negative square roots >>
	8-F.17	Relationship between squares and square roots >>
	8-F.18	Solve equations involving squares and square roots >>
	A1-A.6	Square roots >>
Cube roots	8-F.19	Cube roots of perfect cubes >>
	8-F.20	Solve equations involving cubes and cube roots >>
	8-F.21	Estimate cube roots >>
	A1-A.7	Cube roots >>
Scientific notation	8-G.1	Convert between standard and scientific notation >>
	8-G.2	Compare numbers written in scientific notation >>
	8-G.3	Multiply numbers written in scientific notation >>
	8-G.4	Divide numbers written in scientific notation >>
Exponents	8-F.1	Understanding exponents >>
	8-F.2	Evaluate exponents >>
	8-F.4	Exponents with negative bases >>
	8-F.5	Exponents with decimal and fractional bases >>
Undefined expressions		
Find slope from an equation	8-Y.4	Find the slope of a linear equation >>
Evaluate polynomials	A1-Q.7	Evaluate a function >>
Introduction to recursive sequences	A2-BB.4	Evaluate recursive formulas for sequences >>

Write and graph proportional and linear functions

8-I.3	Identify proportional relationships by graphing >>
8-I.5	Write equations for proportional relationships from graphs >>
8-I.7	Graph proportional relationships >>
A1-R.1	Identify proportional relationships >>
A1-S.1	Identify linear functions >>

Functions as models**Definition of a function**

A1-Q.4	Identify functions >>
A1-Q.5	Identify functions: vertical line test >>

Domain and range

A1-Q.2	Domain and range of relations >>
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Function notation in context**Range of polynomial functions****Asymptotes of rational functions**

A1-GG.1	Rational functions: asymptotes and excluded values >>
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Functions of two variables

A1-Q.9	Complete a function table from a graph >>
A1-Q.10	Complete a function table from an equation >>

Geometry**ACT topic****IXL skills****Find unknown angles**

8-O.6	Find missing angles in triangles >>
8-O.7	Find missing angles in quadrilaterals >>
G-C.5	Angle bisectors >>
G-F.2	Triangle Angle-Sum Theorem >>
G-F.3	Exterior Angle Theorem >>
G-F.4	Exterior Angle Inequality >>

Lines of symmetry

G-O.1	Line symmetry >>
G-O.4	Count lines of symmetry >>

Isosceles triangles	G-K.9	Congruency in isosceles and equilateral triangles >>
Precision	G-W.4	Precision >>
Perimeter of composite shapes	G-S.1	Perimeter >>
Area of triangles and rectangles: advanced	6-FF.2	Area of rectangles and squares >>
	6-FF.3	Area of triangles >>
	6-FF.7	Area between two rectangles >>
	6-FF.8	Area between two triangles >>
Area and circumference of circles	7-AA.5	Circles: calculate area, circumference, radius, and diameter >>
	7-AA.6	Circles: word problems >>
Pythagorean theorem with whole numbers	7-Y.1	Pythagorean theorem: find the length of the hypotenuse >>
	7-Y.2	Pythagorean theorem: find the missing leg length >>
Introduction to trigonometric ratios	A1-HH.1	Trigonometric ratios: sin, cos, and tan >>
Find the slope from a graph or two points	A1-S.2	Find the slope of a graph >>
	A1-S.3	Find the slope from two points >>
Midpoints	G-B.4	Midpoints >>
Rotations in the coordinate plane		

Statistics and probability

ACT topic	IXL skills	
Mean and frequency		
Charts and tables: advanced	8-CC.1	Interpret tables >>
Probability	A1-JJ.1	Theoretical probability >>
	A1-JJ.2	Experimental probability >>
Venn diagrams	8-M.3	Use Venn diagrams to solve problems >>
Data, precision, and modeling		

Score range 28-32

Number and quantity

ACT topic	IXL skills	
Number properties	5-A.8	Even or odd: arithmetic rules >>
	8-A.4	Prime factorization >>
	8-A.5	Greatest common factor >>
	8-A.6	Least common multiple >>
	8-A.7	GCF and LCM: word problems >>
	8-B.3	Absolute value and opposite integers >>
	8-B.4	Compare and order integers >>
	8-B.5	Integer inequalities with absolute values >>
	8-C.1	Integer addition and subtraction rules >>
	8-C.2	Add and subtract integers using counters >>
	8-C.3	Add and subtract integers >>
	8-C.4	Add and subtract three or more integers >>
	8-C.5	Add and subtract integers: word problems >>
	8-C.6	Integer multiplication and division rules >>
	8-C.7	Multiply and divide integers >>
	8-C.8	Evaluate numerical expressions involving integers >>
Rational and irrational numbers	A1-A.8	Sort rational and irrational numbers >>
	A1-A.9	Classify rational and irrational numbers >>

Rational exponents

- A1-V.1** Exponents with integer bases >>
 - A1-V.2** Exponents with decimal and fractional bases >>
 - A1-V.3** Negative exponents >>
 - A1-V.4** Multiplication with exponents >>
 - A1-V.5** Division with exponents >>
 - A1-V.6** Multiplication and division with exponents >>
 - A1-V.7** Power rule >>
 - A1-V.8** Evaluate expressions using properties of exponents >>
 - A1-V.9** Identify equivalent expressions involving exponents >>
 - A1-V.10** Evaluate integers raised to rational exponents >>
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Multiply complex numbers

- A2-H.4** Multiply complex numbers >>
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Vectors and matrices

- A2-G.3** Add and subtract matrices >>
 - A2-G.4** Multiply a matrix by a scalar >>
 - A2-G.5** Add and subtract scalar multiples of matrices >>
 - PC-U.7** Add and subtract vectors >>
 - PC-U.9** Multiply a vector by a scalar >>
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Algebra and functions

ACT topic	IXL skills	
Multi-step percent and proportion problems	A1-D.8	Multi-step problems with percents >>
Write functions and equations	A1-J.9	Create equations with no solutions or infinitely many solutions >>
	A1-R.4	Write direct variation equations >>
	A1-R.7	Write inverse variation equations >>
	A1-S.4	Find a missing coordinate using slope >>
	A1-S.10	Slope-intercept form: write an equation from a word problem >>
	A1-S.12	Write linear functions to solve word problems >>
	A1-S.24	Write an equation for a parallel or perpendicular line >>
	A1-T.4	Linear inequalities: word problems >>
	G-E.7	Find the distance between a point and a line >>
Interpret graphs	A1-Q.6	Find values using function graphs >>
	A1-Q.9	Complete a function table from a graph >>
	A1-Q.11	Interpret the graph of a function: word problems >>
	A1-R.1	Identify proportional relationships >>
	A1-R.2	Find the constant of variation >>
	A1-S.7	Slope-intercept form: write an equation from a graph >>
	A1-S.22	Point-slope form: write an equation from a graph >>
	A1-BB.1	Characteristics of quadratic functions >>
Vertical translations of graphs		

Equivalent expressions and equations

- A1-J.6** Solve equations with variables on both sides >>
- A1-J.11** Solve linear equations: mixed review >>
- A1-I.2** Simplify variable expressions involving like terms and the distributive property >>
- A1-I.3** Identify equivalent linear expressions >>
- A1-I.8** Rearrange multi-variable equations >>
- A1-S.15** Write equations in standard form >>
- A1-T.2** Linear inequalities: solve for y >>
- A2-N.4** Simplify rational expressions >>
- A2-N.5** Multiply and divide rational expressions >>
- A2-N.6** Add and subtract rational expressions >>

Solve linear inequalities

- A1-K.5** Solve one-step linear inequalities: multiplication and division >>
- A1-K.6** Solve one-step linear inequalities >>
- A1-K.8** Solve two-step linear inequalities >>
- A1-K.10** Solve advanced linear inequalities >>

Graph linear inequalities on number lines

- A1-K.7** Graph solutions to one-step linear inequalities >>
 - A1-K.9** Graph solutions to two-step linear inequalities >>
 - A1-K.11** Graph solutions to advanced linear inequalities >>
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Systems of linear equations

- A1-U.1** Is (x, y) a solution to the system of equations? >>
- A1-U.2** Solve a system of equations by graphing >>
- A1-U.3** Solve a system of equations by graphing:
word problems >>
- A1-U.4** Find the number of solutions to a system of
equations by graphing >>
- A1-U.5** Find the number of solutions to a
system of equations >>
- A1-U.6** Classify a system of equations by graphing >>
- A1-U.7** Classify a system of equations >>
- A1-U.8** Solve a system of equations using substitution >>
- A1-U.9** Solve a system of equations using substitution:
word problems >>
- A1-U.10** Solve a system of equations using elimination >>
- A1-U.11** Solve a system of equations using elimination:
word problems >>
- A1-U.12** Solve a system of equations using
augmented matrices >>
- A1-U.13** Solve a system of equations using augmented matrices:
word problems >>
- A1-U.14** Solve a system of equations using any method >>
- A1-U.15** Solve a system of equations using any method:
word problems >>

Solve linear inequalities

- A1-K.5** Solve one-step linear inequalities: multiplication
and division >>
- A1-K.6** Solve one-step linear inequalities >>
- A1-K.8** Solve two-step linear inequalities >>
- A1-K.10** Solve advanced linear inequalities >>

Graph linear inequalities on number lines

- A1-K.7** Graph solutions to one-step linear inequalities >>
- A1-K.9** Graph solutions to two-step linear inequalities >>
- A1-K.11** Graph solutions to advanced linear inequalities >>

Solve quadratic equations	A1-BB.6	Solve a quadratic equation using the zero product property >>
	A1-BB.7	Solve a quadratic equation by factoring >>
	A1-BB.8	Complete the square >>
	A1-BB.9	Solve a quadratic equation by completing the square >>
	A1-BB.10	Solve a quadratic equation using the quadratic formula >>
Solve absolute value equations	A1-L.1	Solve absolute value equations >>
Qualitative descriptions of graphs: rates of change		
Write inversely proportional functions	A1-R.7	Write inverse variation equations >>
	A1-R.8	Write and solve inverse variation equations >>
Recursive sequences	A2-BB.8	Write a formula for a recursive sequence >>
Evaluate composite functions	A2-O.4	Composition of linear functions: find a value >>
	A2-O.6	Composition of linear and quadratic functions: find a value >>

Geometry

ACT topic	IXL skills	
Advanced problems with area, perimeter, and volume	G-S.7	Area and circumference of circles >>
	G-S.10	Area and perimeter of similar figures >>
	G-T.8	Surface area and volume of similar solids >>
Pythagorean theorem	A1-F.14	Pythagorean theorem >>
	A1-F.15	Pythagorean theorem: word problems >>
	A1-F.16	Converse of the Pythagorean theorem: is it a right triangle? >>
Similar and congruent triangles	A1-F.17	Special right triangles >>
	G-K.5	SSS, SAS, ASA, and AAS Theorems >>
	G-K.9	Congruency in isosceles and equilateral triangles >>
	G-K.11	Hypotenuse-Leg Theorem >>
	G-P.5	Similar triangles and indirect measurement >>
	G-P.7	Similarity rules for triangles >>
	G-P.10	Triangle Proportionality Theorem >>
Right triangles	G-R.3	Trigonometric ratios in similar right triangles >>
	G-R.8	Trigonometric ratios: find a side length >>
	G-R.9	Trigonometric ratios: find an angle measure >>
	G-R.10	Solve a right triangle >>
Distance formula	G-B.9	Distance formula >>
Parallel and perpendicular lines in the coordinate plane	G-E.6	Equations of parallel and perpendicular lines >>
Reflections and rotations in the coordinate plane	G-L.6	Reflections: find the coordinates >>
	G-L.9	Rotations: find the coordinates >>

Introduction to parabolas and circles in the coordinate plane

A2-T.1	Identify the direction a parabola opens >>
A2-T.2	Find the vertex of a parabola >>
A2-T.3	Find the focus or directrix of a parabola >>
A2-T.4	Find the axis of symmetry of a parabola >>
A2-U.1	Find the center of a circle >>
A2-U.2	Find the radius or diameter of a circle >>

Statistics and probability

ACT topic	IXL skills	
Weighted averages	A1-O.5	Weighted averages: word problems >>
Charts and tables: advanced	8-CC.1	Interpret tables >>
	A2-CC.6	Find probabilities using two-way frequency tables >>
Counting techniques	A1-JJ.3	Compound events: find the number of outcomes >>
	A1-JJ.6	Permutations >>
	A1-JJ.7	Counting principle >>
	A1-JJ.8	Permutation and combination notation >>
Advanced probability	A2-CC.9	Find conditional probabilities >>
	A2-CC.11	Find conditional probabilities using two-way frequency tables >>
Independent events	A2-CC.7	Identify independent events >>
	A2-CC.8	Probability of independent and dependent events >>
	A2-CC.10	Independence and conditional probability >>

Score range 33-36

Number and quantity

ACT topic	IXL skills	
Advanced number concepts	8-E.8	Apply addition, subtraction, multiplication, and division rules >>
	A1-A.1	Compare and order rational numbers >>
	A1-A.8	Sort rational and irrational numbers >>
	A1-A.9	Classify rational and irrational numbers >>
	A1-A.10	Classify numbers >>
	A1-B.4	Add and subtract rational numbers >>
	A1-B.5	Multiply and divide rational numbers >>
	A1-B.6	Evaluate numerical expressions involving rational numbers >>
	A1-O.3	Consecutive integer problems >>
	A1-GG.2	Simplify complex fractions >>
	A2-A.2	Evaluate variable expressions involving rational numbers >>
	A2-L.2	Roots of rational numbers >>
Complex numbers	A2-H.2	Add and subtract complex numbers >>
	A2-H.3	Complex conjugates >>
	A2-H.5	Divide complex numbers >>
	A2-H.6	Add, subtract, multiply, and divide complex numbers >>
	A2-H.7	Absolute values of complex numbers >>
	A2-H.8	Powers of i >>
Multiply matrices	A2-G.6	Multiply two matrices >>

Matrix properties

A2-G.7	Simplify matrix expressions >>
A2-G.8	Properties of matrices >>
A2-G.9	Solve matrix equations >>
A2-G.10	Determinant of a matrix >>

Algebra and functions

ACT topic	IXL skills	
Advanced word problems		
Write functions and equations: advanced	A1-CC.3	Write linear, quadratic, and exponential functions >>
	A2-C.3	Write a linear inequality: word problems >>
Draw conclusions based on algebraic properties	A1-S.14	Compare linear functions: graphs, tables, and equations >>
	A2-O.1	Add and subtract functions >>
	A2-O.2	Multiply functions >>
	A2-O.3	Divide functions >>
Draw conclusions based on graphs	A2-E.3	Solve a system of equations by graphing: word problems >>
	A2-J.11	Match quadratic functions and graphs >>
	A2-K.14	Match polynomials and graphs >>
	A2-S.3	Match exponential functions and graphs >>
Independent events	A2-CC.7	Identify independent events >>
	A2-CC.8	Probability of independent and dependent events >>
	A2-CC.10	Independence and conditional probability >>

Characteristics of graphs	A2-D.6	Find the slope of a linear function >>
	A2-J.1	Characteristics of quadratic functions >>
	A2-L.12	Domain and range of radical functions >>
	A2-N.1	Rational functions: asymptotes and excluded values >>
	A2-S.1	Domain and range of exponential and logarithmic functions >>
	A2-T.8	Find properties of a parabola from equations in general form >>
	A2-U.6	Find properties of circles from equations in general form >>
	A2-V.7	Find properties of ellipses from equations in general form >>
	A2-W.9	Find properties of hyperbolas from equations in general form >>
	A2-Z.1	Find properties of sine functions >>
	A2-Z.5	Find properties of cosine functions >>
Horizontal and vertical translations of graphs	A2-P.2	Translations of functions >>
Solve absolute value inequalities	A2-C.6	Solve absolute value inequalities >>
	A2-C.7	Graph solutions to absolute value inequalities >>
Graph quadratic inequalities on number lines	A2-C.10	Graph solutions to quadratic inequalities >>
Polynomial remainder theorem	A2-K.4	Divide polynomials using long division >>
	A2-K.5	Divide polynomials using synthetic division >>
	A2-K.6	Evaluate polynomials using synthetic division >>
Evaluate and compare models		
Write exponential functions	A2-S.12	Exponential growth and decay: word problems >>
	A2-S.13	Compound interest: word problems >>
	A2-S.14	Continuously compounded interest: word problems >>

Geometric sequences	A2-BB.2	Find terms of a geometric sequence >>
	A2-BB.7	Write a formula for a geometric sequence >>
Unit circle	A2-Y.6	Find trigonometric ratios using the unit circle >>
Graphs of trigonometric functions	A2-Z.2	Write equations of sine functions from graphs >>
	A2-Z.4	Graph sine functions >>
	A2-Z.6	Write equations of cosine functions from graphs >>
	A2-Z.8	Graph cosine functions >>
	A2-Z.9	Graph sine and cosine functions >>
Trigonometric properties	A2-Y.12	Solve trigonometric equations I >>
	A2-Y.13	Solve trigonometric equations II >>
	A2-Y.14	Trigonometric ratios: find a side length >>
	A2-Y.15	Trigonometric ratios: find an angle measure >>
	A2-Y.16	Solve a right triangle >>
	A2-Y.17	Law of Sines >>
	A2-Y.18	Law of Cosines >>
	A2-Y.19	Solve a triangle >>
	A2-Y.20	Area of a triangle: sine formula >>
	A2-Y.21	Area of a triangle: Law of Sines >>
	A2-AA.3	Trigonometric identities I >>
	A2-AA.4	Trigonometric identities II >>

Logarithms

A2-R.4	Evaluate logarithms >>
A2-R.5	Evaluate natural logarithms >>
A2-R.6	Change of base formula >>
A2-R.7	Identify properties of logarithms >>
A2-R.8	Product property of logarithms >>
A2-R.9	Quotient property of logarithms >>
A2-R.10	Power property of logarithms >>
A2-R.11	Properties of logarithms: mixed review >>
A2-R.12	Evaluate logarithms: mixed review >>

Composition of functions

A2-O.5	Composition of linear functions: find an equation >>
A2-O.7	Composition of linear and quadratic functions: find an equation >>

Geometry

ACT topic	IXL skills
Arcs and angles in circles	G-U.2 Central angles >> G-U.3 Arc measure and arc length >> G-U.4 Area of sectors >> G-U.5 Circle measurements: mixed review >> G-U.6 Arcs and chords >> G-U.7 Tangent lines >> G-U.8 Perimeter of polygons with an inscribed circle >> G-U.9 Inscribed angles >> G-U.10 Angles in inscribed right triangles >> G-U.11 Angles in inscribed quadrilaterals I >> G-U.12 Angles in inscribed quadrilaterals II >>

Area of composite figures	G-S.8	Area of compound figures >>
Scale factors	G-L.15	Dilations: scale factor and classification >>
Draw conclusions	G-A.2	Scale drawings: word problems >>
	G-C.8	Proofs involving angles >>
	G-D.6	Proofs involving parallel lines I >>
	G-D.7	Proofs involving parallel lines II >>
	G-I.1	Identify hypotheses and conclusions >>
	G-I.2	Counterexamples >>
	G-I.3	Conditionals >>
	G-I.4	Negations >>
	G-I.5	Converses, inverses, and contrapositives >>
	G-I.6	Biconditionals >>
	G-K.2	Proving triangles congruent by SSS and SAS >>
	G-K.4	Proving triangles congruent by ASA and AAS >>
	G-K.7	Proving triangles congruent by SSS, SAS, ASA, and AAS >>
	G-K.8	Proofs involving corresponding parts of congruent triangles >>
	G-K.10	Proofs involving isosceles triangles >>
	G-M.8	Proofs involving triangles I >>
	G-M.9	Proofs involving triangles II >>
	G-N.11	Proofs involving quadrilaterals I >>
	G-N.12	Proofs involving quadrilaterals II >>
	G-P.14	Proofs involving similarity in right triangles >>
	G-P.15	Prove the Pythagorean theorem >>

Advanced geometry problems

G-J.2	Solve problems involving corresponding parts >>
G-M.1	Midsegments of triangles >>
G-M.2	Triangles and bisectors >>
G-M.4	Angle-side relationships in triangles >>
G-P.4	Side lengths and angle measures in similar figures >>
G-P.6	Perimeters of similar figures >>
G-P.8	Similar triangles and similarity transformations >>
G-P.11	Areas of similar figures >>
G-S.9	Area between two shapes >>
G-S.11	Heron's formula >>

Statistics and probability

ACT topic	IXL skills
Mean, median, and mode	A1-KK.2 Mean, median, mode, and range >>
Draw conclusions from charts and tables	A2-CC.6 Find probabilities using two-way frequency tables >> A2-DD.2 Write a discrete probability distribution >>
Randomization	A2-EE.12 Experiment design >>
Conditional and joint probability	A2-CC.9 Find conditional probabilities >> A2-CC.10 Independence and conditional probability >> A2-CC.11 Find conditional probabilities using two-way frequency tables >> A2-CC.12 Find probabilities using the addition rule >>
Statistical modeling	A2-EE.1 Identify biased samples >> A2-EE.13 Analyze the results of an experiment using simulations >>