



IXL Skill Plan for the ACT[®] Math



Use IXL's interactive skill plan to get up-to-date skill alignments, assign skills to your students, and track progress.

www.ixl.com/math/skill-plans/act-math

This document includes IXL skill alignments to the ACT[®]. IXL provides skill alignments as a service to teachers, students, and parents. The skill alignments are not affiliated with, sponsored by, or endorsed by ACT, Inc. IXL and IXL Learning are registered trademarks of IXL Learning, Inc. All other trademarks and registered trademarks and copyrights are the property of their respective owners.

Score range 13–15

Number and Quantity

Standard	IXL skills
Whole numbers and decimals	<ol style="list-style-type: none"> 1. Divide multi-digit numbers by 1-digit numbers XHZ 2. Add and subtract whole numbers 2KJ 3. Multiply whole numbers ZCL 4. Divide whole numbers - 2-digit divisors FL2 5. Divide whole numbers - 3-digit divisors STW 6. Add and subtract decimals BP2 7. Multiply decimals TCU 8. Divide decimals 6HB
Equivalent fractions	<ol style="list-style-type: none"> 1. Find equivalent fractions using area models HYC 2. Graph equivalent fractions on number lines WQL 3. Patterns of equivalent fractions 7LH 4. Write fractions in lowest terms A76 5. Equivalent fractions review 9P3
Positive rational numbers on number lines	<ol style="list-style-type: none"> 1. Number lines - up to 1,000 KFQ 2. Fractions on number lines ULL 3. Decimal number lines BBX

Algebra and Functions

Standard	IXL skills
Word problems with whole numbers and money	<ol style="list-style-type: none"> 1. Add and subtract money amounts: word problems DR9 2. Multiply money: word problems C5S 3. Divide money amounts: word problems SEF 4. Add, subtract, multiply, and divide money amounts: word problems HGN 5. Price lists CVW

Introduction to expressions

1. Write variable expressions UZZ
2. Write variable expressions: word problems E2M

Solve simple equations

1. Solve one-step equations with whole numbers WLR

Arithmetic patterns

1. Number sequences involving decimals H73
2. Addition and subtraction patterns with fractions MMR

Geometry

Standard

IXL skills

Lengths of line segments

Measurement conversions

1. Exchanging money - with pictures VZD
2. Convert time units CXF
3. Conversion tables - customary units 7HU
4. Conversion tables - metric units 7QS

Statistics and Probability

Standard

IXL skills

Introduction to mean

1. Find the mean 76J

Introduction to charts and tables

1. Read a table B9R

Score range 16–19

Number and Quantity

Standard	IXL skills
Factors	<ol style="list-style-type: none"> 1. Multiplication facts to 12: find the missing factor 76F 2. Factors 7K3
Place value	<ol style="list-style-type: none"> 1. Place values in whole numbers MNF 2. Decimal place values CR8
Rational numbers on number lines	<ol style="list-style-type: none"> 1. Fractions on number lines ULL 2. Integers on number lines A5Y 3. Graph integers on horizontal and vertical number lines EM8 4. Decimal number lines BBX

Algebra and Functions

Standard	IXL skills
Arithmetic with rational numbers	<ol style="list-style-type: none"> 1. Maps with decimal distances J7D 2. Maps with fractional distances X8Y 3. Add, subtract, multiply, or divide two whole numbers R99 4. Ratios and rates: word problems ZB9 5. Solve the proportion 7H5 6. Add and subtract decimals BP2 7. Multiply decimals TCU 8. Divide decimals 6HB 9. Add and subtract fractions NGL 10. Add and subtract mixed numbers 9BE 11. Multiply fractions PDK 12. Divide fractions X7A 13. Percents of numbers and money amounts 93K
Qualitative descriptions of graphs	

Definitions of whole number operations

Evaluate expressions with whole numbers

1. Evaluate variable expressions with whole numbers Q8Z
2. Evaluate multi-variable expressions HC9

Solve one-step equations

1. Solve one-step linear equations TXJ

Combine like terms

1. Add and subtract like terms QP7

Geometric patterns

1. Complete a geometric number sequence X8Q

Geometry

Standard

IXL skills

Introduction to angles with parallel lines

1. Transversals: name angle pairs V85

Perimeter

1. Perimeter with whole number side lengths UJ2
2. Perimeter with decimal side lengths K7R
3. Perimeter with fractional side lengths WQU

Area of rectangles

1. Find the area of rectangles and squares 8KJ

Introduction to coordinate planes

1. Objects on a coordinate plane NTR
2. Graph points on a coordinate plane AST

Statistics and Probability

Standard

IXL skills

Mean

1. Find the mean AAP

Charts and tables

1. Price lists WUU
2. Read a table K5P
3. Interpret frequency charts: one-step problems UEK

Probability of an event and its complement

Score range 20–23

Number and Quantity

Standard	IXL skills
Number concepts	<ol style="list-style-type: none"> 1. Compare and order decimals ANM 2. Factors 7K3 3. Divisibility rules VW5 4. Prime or composite JYA 5. Prime factorization YVA 6. Greatest common factor 3M8 7. Round decimals and mixed numbers 5RT 8. Convert between decimals and fractions or mixed numbers 2RC
Powers of ten	<ol style="list-style-type: none"> 1. Write powers of ten with exponents DLL
Distance on number lines	<ol style="list-style-type: none"> 1. Lengths of segments on number lines JSD
Absolute value	<ol style="list-style-type: none"> 1. Absolute value and opposites KGR
Distance in the coordinate plane	<ol style="list-style-type: none"> 1. Distance between two points A7P
Matrix addition	<ol style="list-style-type: none"> 1. Add and subtract matrices BR7

Algebra and Functions

Standard	IXL skills
Rate and proportion problems	<ol style="list-style-type: none"> 1. Multi-step word problems EHX 2. Solve proportions 2ZL 3. Solve proportions: word problems 8ES 4. Scale drawings: word problems 8B7 5. Percent of change GRG 6. Percent of change: word problems 59V 7. Percent of a number: tax, discount, and more SKZ 8. Find the percent: tax, discount, and more VQX

Expressions in words and symbols

1. Write variable expressions: two or three operations 6QT
2. Write an equation from words F6R

Linear graph word problems

Evaluate expressions with integers

1. Evaluate one-variable expressions V77
2. Evaluate multi-variable expressions QZT
3. Evaluate absolute value expressions 2YA

Add and subtract expressions

1. Add and subtract like terms QP7

Solve linear equations

1. Model and solve equations using algebra tiles GRH
2. Write and solve equations that represent diagrams GBC
3. Solve one-step linear equations TXJ
4. Solve two-step linear equations QAK
5. Solve advanced linear equations 28N
6. Solve equations with variables on both sides 7S7
7. Solve equations: complete the solution EVP
8. Solve linear equations: mixed review DN6

Multiply binomials

1. Multiply two binomials M7Q

Graph inequalities on number lines

1. Graph inequalities H68

Introduction to slope

1. Graph a line using slope FSV

Evaluate linear and quadratic functions

1. Evaluate a linear function LNV
2. Complete a table and graph a linear function JFG
3. Complete a function table: quadratic functions LfV

Geometry

Standard	IXL skills
Angles with parallel lines	1. Transversals of parallel lines: find angle measures WB9
Angle properties	1. Angle vocabulary 9U2 2. Angle measures BCQ 3. Identify complementary, supplementary, vertical, adjacent, and congruent angles 7P7
Area and perimeter of triangles and rectangles	1. Area of rectangles and squares BE9 2. Area of triangles C8S
Introduction to the Pythagorean theorem	
Introduction to geometric formulas	1. Area of rectangles and squares BE9 2. Area of triangles C8S 3. Volume of cubes and rectangular prisms XHF 4. Surface area of cubes and rectangular prisms RMG
Coordinate plane	1. Translations: graph the image ZUF 2. Coordinate plane review H6E

Statistics and Probability

Standard	IXL skills
Mean: find the missing value	1. Mean: find the missing number E6A
Translate between types of graphs	
Introduction to probability	1. Probability of simple events 5ZY
Counting and combinations	
Exhibit knowledge of simple counting techniques	1. Compound events: find the number of outcomes HZR 2. Counting principle CNQ

Score range 24–27

Number and Quantity

Standard	IXL skills
Order fractions	1. Put fractions in order T76
Least common multiple	1. Least common multiple 2QK 2. GCF and LCM: word problems E62 3. Least common denominator 46Z
Numeric factors	1. Factors 7K3 2. GCF and LCM: word problems E62 3. Write fractions in lowest terms ZGT
Introduction to complex numbers	1. Introduction to complex numbers 5VV
Add and subtract matrices	1. Add and subtract matrices BR7

Algebra and Functions

Standard	IXL skills
Multi-step measurement problems	1. Convert rates and measurements: customary units TXC 2. Convert rates and measurements: metric units 6W2 3. Unit prices with unit conversions LT6 4. Rate of travel: word problems 2C8
Write simple functions and equations	1. Write variable expressions: word problems MEC 2. Write linear functions: word problems (Eighth grade) YK6 3. Solve proportions: word problems 8ES 4. Scale drawings: word problems 8B7 5. Write linear functions: word problems (Algebra 1) 9RQ

Graph linear equations

1. Slope-intercept form: graph an equation UWB
2. Complete a table and graph a linear function JFG
3. Standard form: graph an equation U6U
4. Point-slope form: graph an equation F8H

Numbers in real-world contexts

Linear equation word problems

1. Write variable expressions from diagrams FPF
2. Write linear functions: word problems (Eighth grade) YK6
3. Solve one-step and two-step equations: word problems UFG
4. Write linear functions: word problems (Algebra 1) 9RQ

Solve simple linear inequalities

1. Solve one-step linear inequalities: addition and subtraction RZV

Graph compound inequalities on number lines

1. Graph compound inequalities BQX

Add, subtract, and multiply polynomials

1. Add and subtract polynomials using algebra tiles J7V
2. Add and subtract polynomials 5EK
3. Add polynomials to find perimeter 8AS
4. Multiply a polynomial by a monomial G2G
5. Multiply two binomials using algebra tiles WR5
6. Multiply two binomials M7Q
7. Multiply two binomials: special cases 9JN
8. Multiply polynomials 58A

Solve simple quadratic equations

1. Factor quadratics using algebra tiles Y6U
2. Factor quadratics with leading coefficient 1 S9P
3. Factor quadratics with other leading coefficients 7ED
4. Factor quadratics: special cases 56E
5. Solve a quadratic equation using square roots ERF
6. Solve a quadratic equation using the zero product property TNM

Square roots

1. Square roots of perfect squares 9RS
2. Positive and negative square roots 8TF
3. Estimate positive and negative square roots 96T
4. Relationship between squares and square roots 8W2
5. Solve equations using square roots NNA
6. Square roots 7PZ

Cube roots

1. Cube roots of positive perfect cubes RYG
2. Solve equations using cube roots TQ5
3. Estimate cube roots RLC
4. Cube roots RNT

Scientific notation

1. Convert between standard and scientific notation H8A
2. Compare numbers written in scientific notation RHT
3. Multiply numbers written in scientific notation YZU
4. Divide numbers written in scientific notation SGT

Exponents

1. Understanding exponents VFV
2. Evaluate exponents EYR
3. Exponents with negative bases ZQC
4. Exponents with decimal and fractional bases 8CT

Undefined expressions

Find slope from an equation

1. Slope-intercept form: find the slope and y-intercept U55

Evaluate polynomials

1. Evaluate a function R96

Introduction to recursive sequences

1. Evaluate recursive formulas for sequences QB9

Write and graph proportional and linear functions

1. Identify proportional relationships by graphing RXD
2. Write equations for proportional relationships from graphs G7N

3. Graph proportional relationships and find the slope MQD
4. Identify proportional relationships PAV
5. Identify linear functions from graphs and equations VMQ

Functions as models

Definition of a function

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

Domain and range

1. Domain and range of relations 2CG
-

Function notation in context

Find the domain of polynomial functions and rational functions

Asymptotes of rational functions

1. Rational functions: asymptotes and excluded values B6J
-

Functions of two variables

1. Complete a function table from a graph HXF
 2. Complete a function table from an equation Z73
-

Geometry

Standard

IXL skills

Find unknown angles

1. Find missing angles in triangles JFJ
 2. Find missing angles in quadrilaterals I N2R
 3. Angle bisectors 68E
 4. Triangle Angle-Sum Theorem UBU
 5. Exterior Angle Theorem TGK
 6. Exterior Angle Inequality YQA
-

Lines of symmetry

1. Line symmetry WBX
 2. Count lines of symmetry M7U
-

Isosceles triangles

1. Congruency in isosceles and equilateral triangles HPR
-

Precision

1. Precision M5E
-

Perimeter of composite shapes	1. Perimeter MGB
Area of triangles and rectangles: advanced	<ol style="list-style-type: none"> 1. Area of rectangles and squares BE9 2. Area of triangles C8S 3. Area between two rectangles EY6 4. Area between two triangles 8RG
Area and circumference of circles	<ol style="list-style-type: none"> 1. Area and circumference of circles CHV 2. Circles: word problems P56
Pythagorean theorem with whole numbers	<ol style="list-style-type: none"> 1. Pythagorean theorem: find the length of the hypotenuse LDL 2. Pythagorean theorem: find the missing leg length ME7
Introduction to trigonometric ratios	1. Trigonometric ratios: sin, cos, and tan NH8
Find the slope from a graph or two points	<ol style="list-style-type: none"> 1. Find the slope of a graph E7D 2. Find the slope from two points MD5
Midpoints	1. Midpoints 7RH
Rotations in the coordinate plane	

Statistics and Probability

Standard	IXL skills
Mean and frequency	
Charts and tables: advanced	1. Interpret tables LVG
Probability	<ol style="list-style-type: none"> 1. Theoretical probability 2MS 2. Experimental probability LQV
Venn diagrams	1. Use Venn diagrams to solve problems BZF
Data, precision, and modeling	

Score range 28–32

Number and Quantity

Standard	IXL skills
Number properties	<ol style="list-style-type: none"> 1. Even or odd: arithmetic rules L8Y 2. Prime factorization YVA 3. Greatest common factor 3M8 4. Least common multiple 2QK 5. GCF and LCM: word problems E62 6. Absolute value and opposite integers ABP 7. Compare and order integers T2M 8. Integer inequalities with absolute values U6V 9. Integer addition and subtraction rules YDA 10. Add and subtract integers using counters 5F7 11. Add and subtract integers 6UW 12. Add and subtract three or more integers NB7 13. Add and subtract integers: word problems XP7 14. Integer multiplication and division rules XLP 15. Multiply and divide integers MDA 16. Evaluate numerical expressions involving integers Y6W
Rational and irrational numbers	<ol style="list-style-type: none"> 1. Sort rational and irrational numbers ALH 2. Classify rational and irrational numbers 3S8
Rational exponents	<ol style="list-style-type: none"> 1. Exponents with integer bases EJ8 2. Exponents with decimal and fractional bases 7SS 3. Negative exponents SCM 4. Multiplication with exponents HQD 5. Division with exponents 9SS 6. Multiplication and division with exponents HPK 7. Power rule RWY 8. Evaluate expressions using properties of exponents LRR

9. Identify equivalent expressions involving exponents I EUF
10. Evaluate integers raised to rational exponents PQH

Multiply complex numbers

1. Multiply complex numbers VZ8

Vectors and matrices

1. Add and subtract matrices QFX
2. Multiply a matrix by a scalar 72T
3. Add and subtract scalar multiples of matrices XFV
4. Add vectors KKG
5. Multiply a vector by a scalar WNC

Algebra and Functions

Standard

IXL skills

Multi-step percent and proportion problems

1. Multi-step problems with percents HBJ

Write functions and equations

1. Create equations with no solutions or infinitely many solutions PUK
2. Write direct variation equations Y6M
3. Write inverse variation equations ECT
4. Find a missing coordinate using slope 5C7
5. Slope-intercept form: write an equation from a word problem HWM
6. Write linear functions: word problems 9RQ
7. Write an equation for a parallel or perpendicular line 5SH
8. Linear inequalities: word problems ZAY
9. Find the distance between a point and a line GWC

Interpret graphs

1. Find values using function graphs QCG
2. Complete a function table from a graph HXF
3. Interpret the graph of a function: word problems STU
4. Identify proportional relationships PAV
5. Find the constant of variation 9TD

6. Slope-intercept form: write an equation from a graph 9GW
7. Point-slope form: write an equation from a graph LBX
8. Characteristics of quadratic functions: graphs HW8

Vertical translations of graphs

Equivalent expressions and equations

1. Simplify variable expressions involving like terms and the distributive property ZXX
2. Identify equivalent linear expressions 62A
3. Rearrange multi-variable equations WSJ
4. Solve equations with variables on both sides 7S7
5. Solve linear equations: mixed review DN6
6. Write equations in standard form ESP
7. Linear inequalities: solve for y UYU
8. Simplify rational expressions 37N
9. Multiply and divide rational expressions MG2
10. Add and subtract rational expressions FEX

Solve linear inequalities

1. Solve one-step linear inequalities: multiplication and division BRJ
2. Solve one-step linear inequalities EEX
3. Solve two-step linear inequalities NPZ
4. Solve advanced linear inequalities 9K8

Graph linear inequalities on number lines

1. Graph solutions to one-step linear inequalities E2Z
2. Graph solutions to two-step linear inequalities XVM
3. Graph solutions to advanced linear inequalities 5GC

Systems of linear equations

1. Is (x, y) a solution to the system of equations? LRL
2. Solve a system of equations by graphing TSS
3. Solve a system of equations by graphing: word problems BVB
4. Find the number of solutions to a system of equations by graphing HJW

5. Find the number of solutions to a system of equations ACN
6. Classify a system of equations by graphing T2D
7. Classify a system of equations LTA
8. Solve a system of equations using substitution 8P9
9. Solve a system of equations using substitution: word problems US9
10. Solve a system of equations using elimination A48
11. Solve a system of equations using elimination: word problems NHR
12. Solve a system of equations using augmented matrices P5Y
13. Solve a system of equations using augmented matrices: word problems 9ZW
14. Solve a system of equations using any method HLV
15. Solve a system of equations using any method: word problems GDQ

Solve quadratic equations

1. Solve a quadratic equation using the zero product property TNM
2. Solve a quadratic equation by factoring CSS
3. Complete the square RD2
4. Solve a quadratic equation by completing the square XCL
5. Solve a quadratic equation using the quadratic formula XCF

Solve absolute value equations

1. Solve absolute value equations 9LF

Qualitative descriptions of graphs: rates of change

1. Rate of change: graphs BNH

Write inversely proportional functions

1. Write inverse variation equations ECT
2. Write and solve inverse variation equations UWS

Recursive sequences

1. Write a formula for a recursive sequence ZAH

Evaluate composite functions

1. Composition of linear functions: find a value MFV
 2. Composition of linear and quadratic functions: find a value P9T
-

Geometry

Standard	IXL skills
Advanced problems with area, perimeter, and volume	<ol style="list-style-type: none"> 1. Area and circumference of circles ZDX 2. Area and perimeter of similar figures 6J7 3. Surface area and volume of similar solids N9X
Pythagorean theorem	<ol style="list-style-type: none"> 1. Pythagorean theorem KKT 2. Pythagorean theorem: word problems EU8 3. Converse of the Pythagorean theorem: is it a right triangle? M68
Similar and congruent triangles	<ol style="list-style-type: none"> 1. Special right triangles E9S 2. SSS, SAS, ASA, and AAS Theorems LER 3. Congruency in isosceles and equilateral triangles HPR 4. Hypotenuse-Leg Theorem VQJ 5. Similar triangles and indirect measurement JWK 6. Similarity rules for triangles XJQ 7. Triangle Proportionality Theorem 6WA
Right triangles	<ol style="list-style-type: none"> 1. Trigonometric ratios in similar right triangles 7X7 2. Trigonometric ratios: find a side length UZC 3. Trigonometric ratios: find an angle measure 49E 4. Solve a right triangle GPR
Distance formula	<ol style="list-style-type: none"> 1. Distance formula 59F
Parallel and perpendicular lines in the coordinate plane	<ol style="list-style-type: none"> 1. Equations of parallel and perpendicular lines VEB
Reflections and rotations in the coordinate plane	<ol style="list-style-type: none"> 1. Reflections: find the coordinates SVY 2. Rotations: find the coordinates ZX5
Introduction to parabolas and circles in the coordinate plane	<ol style="list-style-type: none"> 1. Identify the direction a parabola opens HHX 2. Find the vertex of a parabola 2NE 3. Find the focus or directrix of a parabola TNG 4. Find the axis of symmetry of a parabola AAY

5. Find the center of a circle U6E
6. Find the radius or diameter of a circle 5Q2

Statistics and Probability

Standard	IXL skills
Weighted averages	1. Weighted averages: word problems 2TQ
Charts and tables: advanced	<ol style="list-style-type: none"> 1. Interpret tables LVG 2. Find probabilities using two-way frequency tables HGA
Counting techniques	<ol style="list-style-type: none"> 1. Outcomes of compound events GKA 2. Counting principle GTX 3. Permutations SFZ 4. Permutation and combination notation 7TT
Advanced probability	<ol style="list-style-type: none"> 1. Find conditional probabilities 2M4 2. Find conditional probabilities using two-way frequency tables HGC
Independent events	<ol style="list-style-type: none"> 1. Identify independent events RTZ 2. Probability of independent and dependent events X5U 3. Independence and conditional probability AJC

Score range 33–36

Number and Quantity

Standard	IXL skills
Advanced number concepts	<ol style="list-style-type: none"> 1. Apply addition, subtraction, multiplication, and division rules S6N 2. Compare and order rational numbers ALW 3. Sort rational and irrational numbers ALH 4. Classify rational and irrational numbers 3S8 5. Classify numbers RB8 6. Add and subtract rational numbers J8R 7. Multiply and divide rational numbers H6L 8. Evaluate numerical expressions involving rational numbers 8CU 9. Consecutive integer problems HDF 10. Simplify complex fractions HYL 11. Evaluate variable expressions involving rational numbers JDV 12. Roots of rational numbers HNE
Complex numbers	<ol style="list-style-type: none"> 1. Add and subtract complex numbers JVF 2. Complex conjugates 7U5 3. Divide complex numbers MBM 4. Add, subtract, multiply, and divide complex numbers CEN 5. Absolute values of complex numbers UJS 6. Powers of i EUT
Multiply matrices	<ol style="list-style-type: none"> 1. Multiply two matrices T64
Matrix properties	<ol style="list-style-type: none"> 1. Simplify matrix expressions GCE 2. Properties of matrices RA5 3. Solve matrix equations QU8 4. Determinant of a matrix KLQ

Algebra and Functions

Standard	IXL skills
Advanced word problems	
Write functions and equations: advanced	<ol style="list-style-type: none"> 1. Write linear, quadratic, and exponential functions from tables AFA 2. Write a linear inequality: word problems LLV
Draw conclusions based on algebraic properties	<ol style="list-style-type: none"> 1. Compare linear functions: tables, graphs, and equations GD7 2. Add and subtract functions QQD 3. Multiply functions 49K 4. Divide functions 9PH
Draw conclusions based on graphs	<ol style="list-style-type: none"> 1. Solve a system of equations by graphing: word problems T86 2. Match quadratic functions and graphs QCE 3. Match polynomials and graphs XJU 4. Match exponential functions and graphs PCX
Characteristics of graphs	<ol style="list-style-type: none"> 1. Find the slope of a linear function W67 2. Characteristics of quadratic functions: graphs WMS 3. Domain and range of radical functions HR9 4. Rational functions: asymptotes and excluded values 7JJ 5. Domain and range of exponential and logarithmic functions GLL 6. Find properties of a parabola from equations in general form B7U 7. Find properties of circles from equations in general form 2PA 8. Find properties of ellipses from equations in general form S7E 9. Find properties of hyperbolas from equations in general form RME 10. Find properties of sine functions 2EK 11. Find properties of cosine functions F8Y

Horizontal and vertical translations of graphs	1. Translations of functions F6J
Solve absolute value inequalities	1. Solve absolute value inequalities UKU 2. Graph solutions to absolute value inequalities G85
Graph quadratic inequalities on number lines	1. Graph solutions to quadratic inequalities DP9
Polynomial remainder theorem	1. Divide polynomials using long division YN5 2. Divide polynomials using synthetic division D6D 3. Evaluate polynomials using synthetic division CHC
Evaluate and compare models	
Write exponential functions	1. Exponential growth and decay: word problems TYQ 2. Compound interest: word problems YJW 3. Continuously compounded interest: word problems 5GU
Geometric sequences	1. Find terms of a geometric sequence BHV 2. Write a formula for a geometric sequence Q5V
Unit circle	1. Find trigonometric ratios using the unit circle ZF7
Graphs of trigonometric functions	1. Write equations of sine functions from graphs FGW 2. Graph sine functions 9NS 3. Write equations of cosine functions from graphs 4G8 4. Graph cosine functions KXG 5. Graph sine and cosine functions A7V
Trigonometric properties	1. Solve trigonometric equations I CQB 2. Solve trigonometric equations II SNX 3. Trigonometric ratios: find a side length MHJ 4. Trigonometric ratios: find an angle measure 84G 5. Solve a right triangle DPP 6. Law of Sines BSY

7. Law of Cosines ZQB
8. Solve a triangle YPP
9. Area of a triangle: sine formula LNQ
10. Area of a triangle: Law of Sines 5NP
11. Trigonometric identities I XJJ
12. Trigonometric identities II F8F

Logarithms

1. Evaluate logarithms GBR
2. Evaluate natural logarithms XG9
3. Change of base formula J2R
4. Identify properties of logarithms N59
5. Product property of logarithms CW9
6. Quotient property of logarithms ZNT
7. Power property of logarithms 7T3
8. Properties of logarithms: mixed review 5LL
9. Evaluate logarithms using properties RNH

Composition of functions

1. Composition of linear functions: find an equation RSP
2. Composition of linear and quadratic functions: find an equation EKJ

Geometry

Standard

IXL skills

Arcs and angles in circles

1. Central angles and arc measures VZX
2. Arc length 7L9
3. Area of sectors XZQ
4. Circle measurements: mixed review TFF
5. Arcs and chords P63
6. Tangent lines CFV
7. Perimeter of polygons with an inscribed circle UJT
8. Inscribed angles 98U
9. Angles in inscribed right triangles 6DL
10. Angles in inscribed quadrilaterals I 24Y
11. Angles in inscribed quadrilaterals II 2Y5

Area of composite figures

1. Area of compound figures KHG
-

Scale factors

1. Dilations: find the scale factor ZDM
-

Draw conclusions

1. Scale drawings: word problems M7M
 2. Proofs involving angles HV9
 3. Proofs involving parallel lines I CUV
 4. Proofs involving parallel lines II 5U8
 5. Identify hypotheses and conclusions 7FW
 6. Counterexamples 2GJ
 7. Conditionals VU9
 8. Negations VBY
 9. Converses, inverses, and contrapositives N5P
 10. Biconditionals Q6E
 11. Proving triangles congruent by SSS and SAS VVZ
 12. Proving triangles congruent by ASA and AAS 23Z
 13. Proving triangles congruent by SSS, SAS, ASA, and AAS SZL
 14. Proofs involving corresponding parts of congruent triangles AKL
 15. Proofs involving isosceles triangles V45
 16. Proofs involving triangles I G78
 17. Proofs involving triangles II DUQ
 18. Proofs involving triangles and quadrilaterals V7W
 19. Proofs involving quadrilaterals P77
 20. Proofs involving similarity in right triangles XCT
 21. Prove the Pythagorean theorem JGT
-

Advanced geometry problems

1. Solve problems involving corresponding parts WYB
2. Midsegments of triangles 8GT
3. Triangles and bisectors GWE
4. Angle-side relationships in triangles ZN8
5. Side lengths and angle measures in similar figures E2K
6. Perimeters of similar figures 9T8

7. Similar triangles and similarity transformations G2Z
8. Areas of similar figures 2BA
9. Area between two shapes SB6
10. Heron's formula KU2

Statistics and Probability

Standard	IXL skills
Mean, median, and mode	1. Mean, median, mode, and range MHB
Draw conclusions from charts and tables	<ol style="list-style-type: none"> 1. Find probabilities using two-way frequency tables HGA 2. Write a discrete probability distribution RH6
Randomization	1. Experiment design BKR
Conditional and joint probability	<ol style="list-style-type: none"> 1. Find conditional probabilities 2M4 2. Independence and conditional probability AJC 3. Find conditional probabilities using two-way frequency tables HGC 4. Find probabilities using the addition rule B9L
Statistical modeling	<ol style="list-style-type: none"> 1. Identify biased samples CH7 2. Analyze the results of an experiment using simulations RLB