



IXL Skill Alignment

Integrated 2 alignment for HMH Integrated Math



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Module 1

Analyzing Functions

Textbook section	IXL skills
1.1: Domain, Range, and End Behavior	1. Linear functions over unit intervals XGR
1.2: Characteristics of Function Graphs	1. Average rate of change PHD 2. Find the equation of a regression line D9Y 3. Interpret regression lines UWX
1.3: Inverses of Functions	1. Find values of inverse functions from tables YLX 2. Find inverse functions and relations ZRQ

Module 2

Absolute Value Functions, Equations, and Inequalities

Textbook section	IXL skills
2.1: Graphing Absolute Value Functions	<ol style="list-style-type: none">1. Complete a function table: absolute value functions 2DH2. Graph an absolute value function TD23. Domain and range of absolute value functions: equations FCY4. Transformations of absolute value functions 9TC
2.2: Solving Absolute Value Equations	<ol style="list-style-type: none">1. Solve absolute value equations 2JZ2. Graph solutions to absolute value equations 39B
2.3: Solving Absolute Value Inequalities	<ol style="list-style-type: none">1. Solve absolute value inequalities UKU2. Graph solutions to absolute value inequalities G85

Module 3

Rational Exponents and Radicals

Textbook section	IXL skills
3.1: Understanding Rational Exponents and Radicals	1. Evaluate rational exponents KJX
3.2: Simplifying Expressions with Rational Exponents	1. Simplify radical expressions with variables 82V 2. Multiplication with rational exponents LMC 3. Division with rational exponents AN5 4. Power rule V2J 5. Simplify expressions involving rational exponents I 2VX

Module 4

Adding and Subtracting Polynomials

Textbook section	IXL skills
4.1: Understanding Polynomial Expressions	1. Polynomial vocabulary <small>DYB</small>
4.2: Adding Polynomial Expressions	
4.3: Subtracting Polynomial Expressions	1. Add and subtract polynomials using algebra tiles <small>J7V</small> 2. Add and subtract polynomials <small>9A3</small>

Module 5

Multiplying Polynomials

Textbook section	IXL skills
5.1: Multiplying Polynomial Expressions by Monomials	1. Multiply a polynomial by a monomial G2G
5.2: Multiplying Polynomial Expressions	1. Multiply two polynomials using algebra tiles WR5 2. Multiply two binomials M7Q 3. Multiply polynomials 8GN
5.3: Special Products of Binomials	1. Multiply two binomials: special cases 9JN

Module 6

Graphing Quadratic Functions

Textbook section	IXL skills
6.1: Understanding Quadratic Functions	<ol style="list-style-type: none">1. Characteristics of quadratic functions: graphs WMS2. Complete a function table: quadratic functions Q9X3. Find the vertex of a parabola 2NE
6.2: Transforming Quadratic Functions	<ol style="list-style-type: none">1. Transformations of quadratic functions 6YS2. Graph quadratic functions in vertex form C7T
6.3: Interpreting Vertex Form and Standard Form	

Module 7

Connecting Intercepts, Zeros, and Factors

Textbook section	IXL skills
7.1: Connecting Intercepts and Zeros	
7.2: Connecting Intercepts and Linear Factors	1. Write a quadratic function from its zeroes G2Q
7.3: Applying the Zero Product Property to Solve Equations	1. Solve a quadratic equation using the zero product property TRU

Module 8

Using Factors to Solve Quadratic Equations

Textbook section	IXL skills
8.1: Solving Equations by Factoring $x^2 + bx + c$	1. Factor quadratics with leading coefficient 1 S9P
8.2: Solving Equations by Factoring $ax^2 + bx + c$	1. Solve a quadratic equation by factoring ENU 2. Factor quadratics using algebra tiles RHD 3. Factor quadratics UB5
8.3: Using Special Factors to Solve Equations	1. Factor quadratics: special cases 56E

Module 9

Using Square Roots to Solve Quadratic Equations

Textbook section	IXL skills
9.1: Solving Equations by Taking Square Roots	1. Solve a quadratic equation using square roots <small>ERF</small>
9.2: Solving Equations by Completing the Square	1. Complete the square <small>9MW</small> 2. Solve a quadratic equation by completing the square <small>NPH</small>
9.3: Using the Quadratic Formula to Solve Equations	1. Solve a quadratic equation using the quadratic formula <small>YQH</small> 2. Using the discriminant <small>QHK</small>
9.4: Choosing a Method for Solving Quadratic Equations	
9.5: Solving Nonlinear Systems	1. Solve a system of linear and quadratic equations: parabolas <small>HVZ</small>

Module 10

Linear, Exponential, and Quadratic Models

Textbook section	IXL skills
10.1: Fitting a Linear Model to Data	1. Analyze a regression line of a data set 6CM
10.2: Graphing Exponential Functions	
10.3: Modeling Exponential Growth and Decay	1. Exponential growth and decay: word problems TYQ
10.4: Modeling with Quadratic Functions	
10.5: Comparing Linear, Exponential, and Quadratic Models	<ol style="list-style-type: none">1. Identify linear, quadratic, and exponential functions from graphs DHB2. Identify linear, quadratic, and exponential functions from tables SP53. Write linear, quadratic, and exponential functions AFA

Module 11

Quadratic Equations and Complex Numbers

Textbook section	IXL skills
11.1: Solving Quadratic Equations by Taking Square Roots	1. Introduction to complex numbers 5VV
11.2: Complex Numbers	1. Add and subtract complex numbers JVF 2. Multiply complex numbers VZ8
11.3: Finding Complex Solutions of Quadratic Equations	1. Solve a quadratic equation using square roots FG7

Module 12

Quadratic Relations and Systems of Equations

Textbook section

IXL skills

12.1: Circles

1. Write equations of circles in standard form from graphs ZLA
2. Write equations of circles in standard form using properties SHN
3. Convert equations of circles from general to standard form D2H
4. Graph circles 2PL

12.2: Parabolas

1. Write equations of parabolas in vertex form using properties EPR
2. Convert equations of parabolas from general to vertex form 39W
3. Find properties of a parabola from equations in general form B7U
4. Graph parabolas YNJ

12.3: Solving Linear-Quadratic Systems

Module 13

Functions and Inverses

Textbook section	IXL skills
13.1: Graphing Polynomial Functions	1. Match polynomials and graphs XJU
13.2: Understanding Inverse Functions	1. Identify inverse functions 9KT
13.3: Graphing Square Root Functions	1. Domain and range of radical functions HR9
13.4: Graphing Cube Root Functions	

Module 14

Proofs with Lines and Angles

Textbook section	IXL skills
14.1: Angles Formed by Intersecting Lines	<ol style="list-style-type: none">1. Identify complementary, supplementary, vertical, adjacent, and congruent angles 7P72. Find measures of complementary, supplementary, vertical, and adjacent angles VZU
14.2: Transversals and Parallel Lines	<ol style="list-style-type: none">1. Transversals: name angle pairs V852. Transversals of parallel lines: find angle measures WB9
14.3: Proving Lines are Parallel	<ol style="list-style-type: none">1. Proofs involving parallel lines I CUV
14.4: Perpendicular Lines	<ol style="list-style-type: none">1. Proofs involving angles HV9

Module 15

Proofs with Triangles and Quadrilaterals

Textbook section	IXL skills
15.1: Interior and Exterior Angles	<ol style="list-style-type: none"> 1. Exterior Angle Theorem <small>TGK</small> 2. Interior angles of polygons <small>SZF</small>
15.2: Isosceles and Equilateral Triangles	<ol style="list-style-type: none"> 1. Congruency in isosceles and equilateral triangles <small>HPR</small> 2. Proofs involving isosceles triangles <small>V45</small>
15.3: Triangle Inequalities	<ol style="list-style-type: none"> 1. Angle-side relationships in triangles <small>ZN8</small> 2. Triangle Inequality Theorem <small>BW7</small>
15.4: Perpendicular Bisectors of Triangles	
15.5: Angle Bisectors of Triangles	<ol style="list-style-type: none"> 1. Angle bisectors <small>68E</small> 2. Triangles and bisectors <small>GWE</small> 3. Proofs involving triangles I <small>G78</small> 4. Construct the inscribed or circumscribed circle of a triangle <small>8VS</small>
15.6: Properties of Parallelograms	<ol style="list-style-type: none"> 1. Properties of parallelograms <small>LLK</small> 2. Proving a quadrilateral is a parallelogram <small>H89</small>
15.7: Conditions for Rectangles, Rhombuses, and Squares	<ol style="list-style-type: none"> 1. Properties of rhombuses <small>QVX</small> 2. Properties of squares and rectangles <small>R9M</small> 3. Proofs involving triangles and quadrilaterals <small>V7W</small>

Module 16

Similarity and Transformations

Textbook section	IXL skills
16.1: Dilations	<ol style="list-style-type: none">1. Dilations: graph the image ZRD2. Dilations: find the coordinates 5KZ3. Dilations: scale factor and classification ZDM
16.2: Proving Figures Are Similar Using Transformations	<ol style="list-style-type: none">1. Similar triangles and similarity transformations G2Z2. Similarity of circles NEP
16.3: Corresponding Parts of Similar Figures	<ol style="list-style-type: none">1. Similarity statements UG82. Side lengths and angle measures in similar figures E2K
16.4: AA Similarity of Triangles	<ol style="list-style-type: none">1. Similarity rules for triangles XJQ

Module 17

Using Similar Triangles

Textbook section	IXL skills
17.1: Triangle Proportionality Theorem	<ol style="list-style-type: none">1. Triangle Proportionality Theorem 6WA2. Prove proportions or angle congruences using similarity DDY
17.2: Subdividing a Segment in a Given Ratio	
17.3: Using Proportional Relationships	<ol style="list-style-type: none">1. Similar triangles and indirect measurement JWK
17.4: Similarity in Right Triangles	<ol style="list-style-type: none">1. Proofs involving similarity in right triangles XCT2. Prove the Pythagorean theorem JGT

Module 18

Trigonometry with Right Triangles

Textbook section	IXL skills
18.1: Tangent Ratio	
18.2: Sine and Cosine Ratio	<ol style="list-style-type: none">1. Trigonometric ratios: sin, cos, and tan D5Z2. Trigonometric ratios: find a side length UZC3. Trigonometric ratios: find an angle measure 49E
18.3: Special Right Triangles	<ol style="list-style-type: none">1. Special right triangles LDM
18.4: Problem Solving with Trigonometry	<ol style="list-style-type: none">1. Solve a right triangle GPR
18.5: Using a Pythagorean Identity	

Module 19

Angles and Segments in Circles

Textbook section	IXL skills
19.1: Central Angles and Inscribed Angles	<ol style="list-style-type: none">1. Central angles and arc measures VZX2. Inscribed angles 98U
19.2: Angles in Inscribed Quadrilaterals	<ol style="list-style-type: none">1. Angles in inscribed quadrilaterals I 24Y2. Angles in inscribed quadrilaterals II 2Y5
19.3: Tangents and Circumscribed Angles	<ol style="list-style-type: none">1. Tangent lines CFV2. Construct a tangent line to a circle JSH
19.4: Segment Relationships in Circles	
19.5: Angle Relationships in Circles	

Module 20

Arc Length and Sector Area

Textbook section	IXL skills
20.1: Justifying Circumference and Area of a Circle	1. Area and circumference of circles ZDX
20.2: Arc Length and Radian Measure	1. Arc length 7L9 2. Convert between radians and degrees EDC
20.3: Sector Area	1. Area of sectors XZQ

Module 21

Volume Formulas

Textbook section	IXL skills
21.1: Volume of Prisms and Cylinders	1. Volume of prisms and cylinders N5F
21.2: Volume of Pyramids	
21.3: Volume of Cones	1. Volume of pyramids and cones 7J3
21.4: Volume of Spheres	
21.5: Scale Factor	1. Perimeters of similar figures 9T8 2. Areas of similar figures 2BA 3. Surface area and volume of similar solids N9X

Module 22

Introduction to Probability

Textbook section	IXL skills
22.1: Probability and Set Theory	1. Theoretical and experimental probability 2L5
22.2: Permutations and Probability	1. Counting principle NMP 2. Permutations 2A8
22.3: Combinations and Probability	1. Permutation and combination notation YXM
22.4: Mutually Exclusive and Overlapping Events	1. Find probabilities using two-way frequency tables HGA

Module 23

Conditional Probability and Independence of Events

Textbook section	IXL skills
23.1: Conditional Probability	<ol style="list-style-type: none">1. Find conditional probabilities 2M42. Find conditional probabilities using two-way frequency tables HGC
23.2: Independent Events	<ol style="list-style-type: none">1. Identify independent events RTZ2. Independence and conditional probability AJC
23.3: Dependent Events	<ol style="list-style-type: none">1. Probability of independent and dependent events X5U

Module 24

Probability and Decision Making

Textbook section	IXL skills
24.1: Using Probability to Make Fair Decisions	
24.2: Analyzing Decisions	