IXL Skill Alignment

Int 2 alignment for HMH Integrated Math

Module 1
Analyzing Functions

Textbook section	IXL skills	
1.1: Domain, Range, and End Behavior	**A2-D.9**	Linear functions over unit intervals >>
1.2: Characteristics of Function Graphs	**A2-D.10**	Average rate of change >>
	A2-EE.6	Find the equation of a regression line >>
	A2-EE.7	Interpret regression lines >>
1.3: Inverses of Functions	**A2-O.9**	Find values of inverse functions from tables >>
	A2-O.11	Find inverse functions and relations >>

Module 2
Absolute Value Functions, Equations, and Inequalities

Textbook section	IXL skills	
2.1: Graphing Absolute Value Functions	**A1-DD.1**	Complete a function table: absolute value functions >>
	A1-DD.2	Graph an absolute value function >>
	A1-DD.4	Domain and range of absolute value functions: equations >>
	A1-DD.5	Transformations of absolute value functions >>
2.2: Solving Absolute Value Equations	**A2-B.4**	Solve absolute value equations >>
	A2-B.5	Graph solutions to absolute value equations >>
2.3: Solving Absolute Value Inequalities	**A2-C.6**	Solve absolute value inequalities >>
	A2-C.7	Graph solutions to absolute value inequalities >>

Module 3

Rational Exponents and Radicals

Textbook section	IXL skills	
3.1: Understanding Rational Exponents and Radicals	**A2-M.1**	Evaluate rational exponents >>
3.2: Simplifying Expressions with Rational Exponents	**A2-M.2**	Multiplication with rational exponents >>
	A2-M.3	Division with rational exponents >>
	A2-M.4	Power rule >>
	A2-M.5	Simplify expressions involving rational exponents I >>
	A1-EE.2	Simplify radical expressions with variables >>

Module 4
Adding and Subtracting Polynomials

Textbook section	IXL skills	
4.1: Understanding Polynomial Expressions	**A2-K.1**	Polynomial vocabulary >>
4.2: Adding Polynomial Expressions		
4.3: Subtracting Polynomial Expressions	**A2-K.2**	Add and subtract polynomials >>
	A1-Z.3	Add and subtract polynomials using algebra tiles >>

Module 5
Multiplying Polynomials

Textbook section	IXL skills	
5.1: Multiplying Polynomial Expressions by Monomials	**A1-Z.6**	Multiply a polynomial by a monomial >>
5.2: Multiplying Polynomial Expressions	**A2-K.3**	Multiply polynomials >>
	A1-Z.7	Multiply two polynomials using algebra tiles >>
	A1-Z.8	Multiply two binomials >>
5.3: Special Products of Binomials	**A1-Z.9**	Multiply two binomials: special cases >>

Module 6
Graphing Quadratic Functions

Textbook section	IXL skills	
6.1: Understanding Quadratic Functions	**A2-J.1**	Characteristics of quadratic functions >>
	A2-J.2	Complete a function table: quadratic functions >>
	A2-T.2	Find the vertex of a parabola >>
6.2: Transforming Quadratic Functions	**A1-BB.3**	Transformations of quadratic functions >>
	A1-BB.4	Graph quadratic functions in vertex form >>
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	**A2-J.12**	Write a quadratic function from its zeros >>
7.3: Applying the Zero Product Property to Solve Equations	**A2-J.5**	Solve a quadratic equation using the zero product property >>

Module 8

Using Factors to Solve Quadratic Equations

Textbook section	IXL skills	
8.1: Solving Equations by Factoring $x2 + bx + c$	**A1-AA.4**	Factor quadratics with leading coefficient 1 >>
8.2: Solving Equations by Factoring $ax2 + bx + c$	**G-A.9**	Solve a quadratic equation by factoring >>
	A2-I.2	Factor quadratics using algebra tiles >>
	A2-I.3	Factor quadratics >>
8.3: Using Special Factors to Solve Equations	**A1-AA.6**	Factor quadratics: special cases >>

Module 9
Using Square Roots to Solve Quadratic Equations

Textbook section	IXL skills	
9.1: Solving Equations by Taking Square Roots	**A2-J.4**	Solve a quadratic equation using square roots >>
9.2: Solving Equations by Completing the Square	**A2-J.7**	Complete the square >>
	A2-J.8	Solve a quadratic equation by completing the square >>
9.3: Using the Quadratic Formula to Solve Equations	**A2-J.9**	Solve a quadratic equation using the quadratic formula >>
	A2-J.10	Using the discriminant >>
9.4: Choosing a Method for Solving Quadratic Equations		
9.5: Solving Nonlinear Systems	**A2-E.15**	Solve a system of linear and quadratic equations >>

Module 10
Linear, Exponential, and Quadratic Models

Textbook section	IXL skills	
10.1: Fitting a Linear Model to Data	**A2-EE.8**	Analyze a regression line of a data set >>
10.2: Graphing Exponential Functions		
10.3: Modeling Exponential Growth and Decay	**A2-S.12**	Exponential growth and decay: word problems >>
10.4: Modeling with Quadratic Functions		
10.5: Comparing Linear, Exponential, and Quadratic Models	**A1-CC.1**	Identify linear, quadratic, and exponential functions from graphs >>
	A1-CC.2	Identify linear, quadratic, and exponential functions from tables >>
	A1-CC.3	Write linear, quadratic, and exponential functions >>

Module 11
Quadratic Equations and Complex Numbers

Textbook section	IXL skills	
11.1: Solving Quadratic Equations by Taking Square Roots	**A2-H.1**	Introduction to complex numbers >>
11.2: Complex Numbers	**A2-H.2**	Add and subtract complex numbers >>
	A2-H.4	Multiply complex numbers >>
11.3: Finding Complex Solutions of Quadratic Equations		

Module 12
Quadratic Relations and Systems of Equations

Textbook section	IXL skills	
12.1: Circles	**A2-U.3**	Write equations of circles in standard form from graphs >>
	A2-U.4	Write equations of circles in standard form using properties >>
	A2-U.5	Convert equations of circles from general to standard form >>
	A2-U.7	Graph circles >>
12.2: Parabolas	**A2-T.6**	Write equations of parabolas in vertex form using properties >>
	A2-T.7	Convert equations of parabolas from general to vertex form >>
	A2-T.8	Find properties of a parabola from equations in general form >>
	A2-T.9	Graph parabolas >>
12.3: Solving Linear-Quadratic Systems		

Module 13
Functions and Inverses

Textbook section	IXL skills	
13.1: Graphing Polynomial Functions	**A2-K.14**	Match polynomials and graphs >>
13.2: Understanding Inverse Functions	**A2-O.8**	Identify inverse functions >>
13.3: Graphing Square Root Functions	**A2-L.12**	Domain and range of radical functions >>
13.4: Graphing Cube Root Functions		

Module 14
Proofs with Lines and Angles

Textbook section	IXL skills	
14.1: Angles Formed by Intersecting Lines	**G-C.3**	Identify complementary, supplementary, vertical, adjacent, and congruent angles >>
	G-C.4	Find measures of complementary, supplementary, vertical, and adjacent angles >>
14.2: Transversals and Parallel Lines	**G-D.3**	Transversals: name angle pairs >>
	G-D.4	Transversals of parallel lines: find angle measures >>
14.3: Proving Lines are Parallel	**G-D.6**	Proofs involving parallel lines I >>
14.4: Perpendicular Lines	**G-C.8**	Proofs involving angles >>

Module 15
Proofs with Triangles and Quadrilaterals

Textbook section	IXL skills	
15.1: Interior and Exterior Angles	**G-F.3**	Exterior Angle Theorem >>
	G-G.2	Interior angles of polygons >>
15.2: Isosceles and Equilateral Triangles	**G-K.9**	Congruency in isosceles and equilateral triangles >>
	G-K.10	Proofs involving isosceles triangles >>
15.3: Triangle Inequalities	**G-M.4**	Angle-side relationships in triangles >>
	G-M.5	Triangle Inequality Theorem >>
15.4: Perpendicular Bisectors of Triangles		
15.5: Angle Bisectors of Triangles	**G-C.5**	Angle bisectors >>
	G-M.2	Triangles and bisectors >>
	G-M.8	Proofs involving triangles I >>
	G-U.17	Construct the inscribed or circumscribed circle of a triangle >>
15.6: Properties of Parallelograms	**G-N.4**	Properties of parallelograms >>
	G-N.5	Proving a quadrilateral is a parallelogram >>
15.7: Conditions for Rectangles, Rhombuses, and Squares	**G-N.6**	Properties of rhombuses >>
	G-N.7	Properties of squares and rectangles >>
	G-N.11	Proofs involving quadrilaterals I >>

Module 16
Similarity and Transformations

Textbook section	IXL skills	
16.1: Dilations	**G-L.13**	Dilations: graph the image >>
	G-L.14	Dilations: find the coordinates >>
	G-L.15	Dilations: scale factor and classification >>
16.2: Proving Figures Are Similar Using Transformations	**G-P.8**	Similar triangles and similarity transformations >>
	G-P.9	Similarity of circles >>
16.3: Corresponding Parts of Similar Figures	**G-P.2**	Similarity statements >>
	G-P.4	Side lengths and angle measures in similar figures >>
16.4: AA Similarity of Triangles	**G-P.7**	Similarity rules for triangles >>

Module 17
Using Similar Triangles

Textbook section	IXL skills	
17.1: Triangle Proportionality Theorem	**G-P.10**	Triangle Proportionality Theorem >>
	G-P.13	Prove proportions or angle congruences using similarity >>
17.2: Subdividing a Segment in a Given Ratio		
17.3: Using Proportional Relationships	**G-P.5**	Similar triangles and indirect measurement >>
17.4: Similarity in Right Triangles	**G-P.14**	Proofs involving similarity in right triangles >>
	G-P.15	Prove the Pythagorean theorem >>

Module 18
Trigonometry with Right Triangles

Textbook section	IXL skills	
18.1: Tangent Ratio		
18.2: Sine and Cosine Ratio	**G-R.1**	Trigonometric ratios: sin, cos, and tan >>
	G-R.8	Trigonometric ratios: find a side length >>
	G-R.9	Trigonometric ratios: find an angle measure >>
18.3: Special Right Triangles	**G-Q.4**	Special right triangles >>
18.4: Problem Solving with Trigonometry	**G-R.10**	Solve a right triangle >>
18.5: Using a Pythagorean Identity		

Module 19
Angles and Segments in Circles

Textbook section	IXL skills	
19.1: Central Angles and Inscribed Angles	**G-U.2**	Central angles >>
	G-U.9	Inscribed angles >>
19.2: Angles in Inscribed Quadrilaterals	**G-U.11**	Angles in inscribed quadrilaterals I >>
	G-U.12	Angles in inscribed quadrilaterals II >>
19.3: Tangents and Circumscribed Angles	**G-U.7**	Tangent lines >>
	G-U.13	Construct a tangent line to a circle >>
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	**G-S.7**	Area and circumference of circles >>
20.2: Arc Length and Radian Measure	**G-U.3**	Arc measure and arc length >>
	A2-X.1	Convert between radians and degrees >>
20.3: Sector Area	**G-U.4**	Area of sectors >>

Module 21
Volume Formulas

Textbook section	IXL skills	
21.1: Volume of Prisms and Cylinders	**G-T.4**	Volume of prisms and cylinders >>
21.2: Volume of Pyramids		
21.3: Volume of Cones	**G-T.5**	Volume of pyramids and cones >>
21.4: Volume of Spheres		
21.5: Scale Factor	**G-P.6**	Perimeters of similar figures >>
	G-P.11	Areas of similar figures >>
	G-T.8	Surface area and volume of similar solids >>

Module 22
Introduction to Probability

Textbook section	IXL skills	
22.1: Probability and Set Theory	**G-X.1**	Theoretical and experimental probability >>
22.2: Permutations and Probability	**G-X.4**	Counting principle >>
	G-X.5	Permutations >>
22.3: Combinations and Probability	**G-X.6**	Permutation and combination notation >>
22.4: Mutually Exclusive and Overlapping Events	**A2-CC.6**	Find probabilities using two-way frequency tables >>

Module 23
Conditional Probability and Independence of Events

Textbook section	IXL skills	
23.1: Conditional Probability	**A2-CC.9**	Find conditional probabilities >>
	A2-CC.11	Find conditional probabilities using two-way frequency tables >>
23.2: Independent Events	**A2-CC.7**	Identify independent events >>
	A2-CC.10	Independence and conditional probability >>
23.3: Dependent Events	**A2-CC.8**	Probability of independent and dependent events >>

Module 24
Probability and Decision Making

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