



IXL Skill Alignment

Int 3 alignment for HMH Integrated Math

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Module 1

Constructions

Textbook section	IXL skills	
1.1: Proving Lines Are Parallel	G-D.6	Proofs involving parallel lines I >>
	G-D.7	Proofs involving parallel lines II >>
1.2: Perpendicular Lines	G-B.6	Perpendicular Bisector Theorem >>
	G-C.8	Proofs involving angles >>
	G-D.2	Construct a perpendicular line >>
1.3: Justifying Constructions	G-B.10	Construct the midpoint or perpendicular bisector of a segment >>
1.4: Properties of Parallelograms	G-N.4	Properties of parallelograms >>
	G-N.5	Proving a quadrilateral is a parallelogram >>

Module 2

Coordinate Proof Using Slope and Distance

Textbook section	IXL skills	
2.1: Slope and Parallel Lines	G-N.3	Graph quadrilaterals >>
2.2: Slope and Perpendicular Lines	G-E.5	Slopes of parallel and perpendicular lines >>
	G-E.6	Equations of parallel and perpendicular lines >>
2.3: Coordinate Proof Using Distance with Segments and Triangles	G-B.7	Midpoint formula - find the midpoint >>
	G-B.9	Distance formula >>
2.4: Coordinate Proof Using Distance with Quadrilaterals		
2.5: Perimeter and Area on the Coordinate Plane	G-S.5	Area and perimeter in the coordinate plane I >>
	G-S.6	Area and perimeter in the coordinate plane II >>
2.6: Subdividing a Segment in a Given Ratio		

Module 3

Visualizing Solids

Textbook section	IXL skills	
3.1: Cross Sections and Solids of Revolution	G-H.3	Nets and drawings of three-dimensional figures >>
	G-H.4	Cross-sections of three-dimensional figures >>
	G-H.5	Solids of revolution >>
3.2: Surface Area of Prisms and Cylinders	G-T.2	Surface area of prisms and cylinders >>
3.3: Surface Area of Pyramids and Cones	G-T.3	Surface area of pyramids and cones >>
3.4: Surface Area of Spheres		

Module 4

Modeling and Problem Solving

Textbook section	IXL skills	
4.1: Scale Factor	G-S.10	Area and perimeter of similar figures >>
	G-T.8	Surface area and volume of similar solids >>
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4.2: Modeling and Density		
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4.3: Problem Solving with Constraints	G-W.6	Minimum and maximum area and volume >>
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Module 5

Polynomial Functions

Textbook section	IXL skills	
5.1: Transformations of Function Graphs	A2-P.1	Function transformation rules >>
5.2: Inverses of Functions	PC-A.16	Find inverse functions and relations >>
5.3: Graphing Cubic Functions		
5.4: Graphing Polynomial Functions	A2-K.8	Find the roots of factored polynomials >>

Module 6

Polynomials

Textbook section	IXL skills	
6.1: Adding and Subtracting Polynomials	A2-K.2	Add and subtract polynomials >>
6.2: Multiplying Polynomials	A2-K.3	Multiply polynomials >>
6.3: The Binomial Theorem	A2-K.16	Pascal's triangle >>
	A2-K.17	Pascal's triangle and the Binomial Theorem >>
	A2-K.18	Binomial Theorem I >>
	A2-K.19	Binomial Theorem II >>
6.4: Factoring Polynomials	A2-I.5	Factor by grouping >>
	A2-I.6	Factor sums and differences of cubes >>
	A2-I.7	Factor polynomials >>
6.5: Dividing Polynomials	A2-K.4	Divide polynomials using long division >>
	A2-K.5	Divide polynomials using synthetic division >>
	A2-K.6	Evaluate polynomials using synthetic division >>

Module 7

Polynomial Equations

Textbook section	IXL skills	
7.1: Finding Rational Solutions of Polynomial Equations	A2-K.10	Rational root theorem >>
7.2: Finding Complex Solutions of Polynomial Equations	A2-K.7	Solve polynomial equations >>
	A2-K.9	Write a polynomial from its roots >>
	A2-K.11	Complex conjugate theorem >>
	A2-K.15	Fundamental Theorem of Algebra >>

Module 8

Rational Functions

Textbook section	IXL skills	
8.1: Graphing Simple Rational Functions	A2-N.1	Rational functions: asymptotes and excluded values >>
8.2: Graphing More Complicated Rational Functions		

Module 9

Rational Expressions and Equations

Textbook section	IXL skills	
9.1: Adding and Subtracting Rational Expressions	A2-N.4	Simplify rational expressions >>
	A2-N.6	Add and subtract rational expressions >>
9.2: Multiplying and Dividing Rational Expressions	A2-N.5	Multiply and divide rational expressions >>
9.3: Solving Rational Equations	PC-E.2	Solve rational equations >>
	A2-N.7	Solve rational equations >>

Module 10

Radical Functions

Textbook section	IXL skills	
10.1: Inverses of Simple Quadratic and Cubic Functions	PC-A.13	Identify inverse functions >>
10.2: Graphing Square Root Functions	PC-G.1	Domain and range of radical functions >>
10.3: Graphing Cube Root Functions		

Module 11

Radical Expressions and Equations

Textbook section	IXL skills	
11.1: Radical Expressions and Rational Exponents	PC-H.4	Evaluate rational exponents >>
	PC-H.5	Operations with rational exponents >>
11.2: Simplifying Radical Expressions	PC-H.6	Simplify radical expressions with variables >>
	PC-H.8	Simplify expressions involving rational exponents >>
11.3: Solving Radical Equations	PC-G.2	Solve radical equations >>

Module 12

Sequences and Series

Textbook section	IXL skills	
12.1: Arithmetic Sequences	A2-BB.1	Find terms of an arithmetic sequence >>
	A2-BB.6	Write a formula for an arithmetic sequence >>
12.2: Geometric Sequences	A2-BB.2	Find terms of a geometric sequence >>
	A2-BB.5	Classify formulas and sequences >>
	A2-BB.7	Write a formula for a geometric sequence >>
12.3: Geometric Series		

Module 13

Exponential Functions

Textbook section	IXL skills	
13.1: Exponential Growth Functions		
13.2: Exponential Decay Functions	PC-F.16	Exponential growth and decay: word problems >>
13.3: The Base e		
13.4: Compound Interest	PC-F.17	Compound interest: word problems >>
	A2-S.14	Continuously compounded interest: word problems >>

Module 14

Modeling with Exponential and Other Functions

Textbook section	IXL skills
14.1: Fitting Exponential Function to Data	
14.2: Choosing Among Linear, Quadratic, and Exponential 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 15

Logarithmic Functions

Textbook section	IXL skills	
15.1: Defining and Evaluating a Logarithmic Function	A2-R.1	Convert between exponential and logarithmic form: rational bases >>
	A2-R.4	Evaluate logarithms >>
	A2-S.1	Domain and range of exponential and logarithmic functions >>
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15.2: Graphing Logarithmic Functions		

Module 16

Logarithmic Properties and Exponential Equations

Textbook section	IXL skills	
16.1: Properties of 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 >>
16.2: Solving Exponential Equations	A2-S.4	Solve exponential equations using factoring >>
	A2-S.5	Solve exponential equations using common logarithms >>

Module 17

Trigonometry with All Triangles

Textbook section	IXL skills	
17.1: Problem Solving with Trigonometry	PC-M.12	Solve a right triangle >>
	PC-M.16	Area of a triangle: sine formula >>
17.2: Law of Sines	PC-M.13	Law of Sines >>
17.3: Law of Cosines	PC-M.14	Law of Cosines >>

Module 18

Unit-Circle Definition of Trigonometric Functions

Textbook section	IXL skills	
18.1: Angles of Rotation and Radian Measure	PC-M.1	Convert between radians and degrees >>
	PC-M.4	Coterminal and reference angles >>
18.2: Defining and Evaluating the Basic Trigonometric Functions	PC-M.3	Quadrants >>
18.3: Using a Pythagorean Identity		

Module 19

Graphing Trigonometric Functions

Textbook section	IXL skills	
19.1: Stretching, Compressing, and Reflecting Sine and Cosine Graphs	PC-N.1	Find properties of sine functions >>
	PC-N.3	Write equations of sine functions using properties >>
	PC-N.5	Find properties of cosine functions >>
	PC-N.7	Write equations of cosine functions using properties >>
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19.2: Stretching, Compressing, and Reflecting Tangent Graphs		
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19.3: Translating Trigonometric Graphs	PC-N.2	Write equations of sine functions from graphs >>
	PC-N.6	Write equations of cosine functions from graphs >>
	PC-N.9	Graph sine and cosine functions >>
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19.4: Fitting Sine Functions to Data		

Module 20

Gathering and Displaying Data

Textbook section	IXL skills
20.1: Data-Gathering Techniques	
20.2: Shape, Center, and Spread	A1-KK.2 Mean, median, mode, and range >> A1-KK.3 Quartiles >>

Module 21

Data Distributions

Textbook section	IXL skills	
21.1: Probability Distributions	PC-Y.4	Expected values of random variables >>
	PC-Y.7	Write the probability distribution for a game of chance >>
	PC-Y.8	Expected values for a game of chance >>
	PC-Y.10	Find probabilities using the binomial distribution >>
21.2: Normal Distributions	PC-Y.12	Find probabilities using the normal distribution >>
	PC-Y.13	Find z-values >>
	PC-Y.14	Find values of normal variables >>
21.3: Sampling Distributions	PC-Y.15	Distributions of sample means >>

Module 22

Making Inferences from Data

Textbook section	IXL skills	
22.1: Confidence Intervals and Margins of Error	PC-Z.12	Find confidence intervals for population means >>
	PC-Z.13	Find confidence intervals for population proportions >>
	PC-Z.14	Interpret confidence intervals for population means >>
22.2: Surveys, Experiments, and Observational Studies	PC-Z.15	Experiment design >>
22.3: Determining the Significance of Experimental Results	PC-Z.16	Analyze the results of an experiment using simulations >>

Module 23

Probability and Decision Making

Textbook section	IXL skills
23.1: Using Probability to Make Fair Decisions	PC-X.2 Calculate probabilities of events >>
23.2: Analyzing Decisions	

Module 24

Angles and Segments in Circles

Textbook section	IXL skills	
24.1: Central Angles and Inscribed Angles	G-U.2	Central angles >>
	G-U.9	Inscribed angles >>
24.2: Angles in Inscribed Quadrilaterals	G-U.11	Angles in inscribed quadrilaterals I >>
	G-U.12	Angles in inscribed quadrilaterals II >>
24.3: Tangents and Circumscribed Angles	G-U.7	Tangent lines >>
	G-U.13	Construct a tangent line to a circle >>
24.4: Segment Relationships in Circles		
24.5: Angle Relationships in Circles		

Module 25

Arc Length and Sector Area

Textbook section	IXL skills	
25.1: Justifying Circumference and Area of a Circle	G-S.7	Area and circumference of circles >>
25.2: Arc Length and Radian Measure	PC-M.2	Radians and arc length >>
25.3: Sector Area	G-U.4	Area of sectors >>

Module 26

Equations of Circles and Parabolas

Textbook section	IXL skills	
26.1: Equation of a Circle	G-V.3	Write equations of circles in standard form from graphs >>
	G-V.4	Write equations of circles in standard form using properties >>
	G-V.5	Convert equations of circles from general to standard form >>
	G-V.7	Graph circles from equations in standard form >>
	G-V.8	Graph circles from equations in general form >>
26.2: Equation of a Parabola	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 >>