



IXL Skill Alignment

Alg 2 alignment for HMH Texas

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Module 1

Analyzing Functions

Textbook section	IXL skills
1.1: Domain, Range, and End Behavior	
1.2: Characteristics of Function Graphs	D.9 Linear functions over unit intervals >> D.10 Average rate of change >> EE.6 Find the equation of a regression line >>
1.3: Transformations of Function Graphs	P.1 Function transformation rules >>
1.4: Inverses of Functions	O.8 Identify inverse functions >> O.9 Find values of inverse functions from tables >>

Module 2

Absolute Value Functions, Equations, and Inequalities

Textbook section	IXL skills	
2.1: Graphing Absolute Value Functions		
2.2: Solving Absolute Value Equations	B.4	Solve absolute value equations >>
	B.5	Graph solutions to absolute value equations >>
2.3: Solving Absolute Value Inequalities	C.6	Solve absolute value inequalities >>
	C.7	Graph solutions to absolute value inequalities >>

Module 3

Quadratic Functions

Textbook section	IXL skills
3.1: Quadratic Functions in Vertex Form	
3.2: Writing Quadratic Functions	
3.3: Fitting Quadratic Functions	

Module 4

Quadratic Equations

Textbook section	IXL skills	
4.1: Solving Quadratic Equations by Taking Square Roots	J.4	Solve a quadratic equation using square roots >>
4.2: Complex Numbers	H.2	Add and subtract complex numbers >>
	H.4	Multiply complex numbers >>
4.3: Finding Complex Solutions of Quadratic Equations	J.8	Solve a quadratic equation by completing the square >>
	J.9	Solve a quadratic equation using the quadratic formula >>
	J.10	Using the discriminant >>
4.4: Solving Quadratic Inequalities	C.10	Graph solutions to quadratic inequalities >>
	C.11	Solve quadratic inequalities >>

Module 5

Quadratic Relations and Systems of Equations and Inequalities

Textbook section	IXL skills	
5.1: Parabolas	T.3	Find the focus or directrix of a parabola >>
	T.8	Find properties of a parabola from equations in general form >>
5.2: Solving Linear-Quadratic Systems	E.15	Solve a system of linear and quadratic equations >>
5.2: Solving Linear Systems in Three Variables	E.12	Solve a system of equations in three variables using substitution >>
5.3: Solving Linear Systems in Three Variables	E.13	Solve a system of equations in three variables using elimination >>
	G.18	Solve a system of equations using augmented matrices >>
	G.19	Solve a system of equations using augmented matrices: word problems >>
5.4: Solving Systems of Linear Inequalities	F.2	Solve systems of linear inequalities by graphing >>

Module 6

Polynomial Functions

Textbook section	IXL skills
6.1: Graphing Cubic Functions	
6.2: Graphing Polynomial Functions	K.14 Match polynomials and graphs >>

Module 7

Polynomials

Textbook section	IXL skills	
7.1: Adding and Subtracting Polynomials	K.2	Add and subtract polynomials >>
7.2: Multiplying Polynomials	K.3	Multiply polynomials >>
7.3: Factoring Polynomials	I.5	Factor by grouping >>
	I.6	Factor sums and differences of cubes >>
	I.7	Factor polynomials >>
7.4: Dividing Polynomials	K.4	Divide polynomials using long division >>
	K.5	Divide polynomials using synthetic division >>
	K.6	Evaluate polynomials using synthetic division >>

Module 8

Polynomial Equations

Textbook section	IXL skills	
8.1: Finding Rational Solutions of Polynomial Equations	K.8	Find the roots of factored polynomials >>
	K.10	Rational root theorem >>
8.2: Finding Complex Solution of Polynomial Equations	K.7	Solve polynomial equations >>
	K.9	Write a polynomial from its roots >>

Module 9

Rational Functions

Textbook section	IXL skills
9.1: Inverse Variation	
9.2: Graphing Simple Rational Functions	
9.3: Graphing More Complicated Rational Functions	N.1 Rational functions: asymptotes and excluded values >>

Module 10

Rational Expressions and Equations

Textbook section	IXL skills	
10.1: Adding and Subtracting Rational Expressions	N.6	Add and subtract rational expressions >>
10.2: Multiplying and Dividing Rational Expressions	N.5	Multiply and divide rational expressions >>
10.3: Solving Rational Equations	N.7	Solve rational equations >>

Module 11

Radical Functions

Textbook section	IXL skills
11.1: Inverses of Simple Quadratic and Cubic Functions	
11.2: Graphing Square Root Functions	L.12 Domain and range of radical functions >>
11.3: Fitting Square Root Functions to Data	
11.4: Graphing Cube Root Functions	

Module 12

Radical Expressions and Equations

Textbook section	IXL skills	
12.1: Radical Expressions and Rational Exponents	M.1	Evaluate rational exponents >>
	M.4	Power rule >>
12.2: Simplifying Radical Expressions	L.4	Simplify radical expressions with variables I >>
	L.5	Simplify radical expressions with variables II >>
	L.7	Multiply radical expressions >>
	L.8	Divide radical expressions >>
	M.5	Simplify expressions involving rational exponents I >>
	M.6	Simplify expressions involving rational exponents II >>
12.3: Solving Radical Equations	L.13	Solve radical equations >>

Module 13

Exponential Functions

Textbook section	IXL skills
13.1: Geometric Sequences	BB.5 Classify formulas and sequences >> BB.7 Write a formula for a geometric sequence >> BB.8 Write a formula for a recursive sequence >>
13.2: Exponential Growth Functions	S.13 Compound interest: word problems >>
13.3: Exponential Decay Functions	S.3 Match exponential functions and graphs >> S.12 Exponential growth and decay: word problems >>
13.4: The Base e	

Module 14

Modeling with Exponential and Other Functions

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

Module 15

Logarithmic Functions

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

Module 16

Logarithmic Properties and Exponential Equations

Textbook section	IXL skills
16.1: Properties of Logarithms	R.6 Change of base formula >>
	R.7 Identify properties of logarithms >>
	R.8 Product property of logarithms >>
	R.9 Quotient property of logarithms >>
	R.10 Power property of logarithms >>
	R.11 Properties of logarithms: mixed review >>
	R.12 Evaluate logarithms: mixed review >>
16.2: Solving Exponential Equations	S.5 Solve exponential equations using common logarithms >>
	S.6 Solve exponential equations using natural logarithms >>
16.3: Solving Logarithmic Equations	S.7 Solve logarithmic equations I >>
	S.8 Solve logarithmic equations II >>