



IXL Skill Alignment

Alg 1 alignment for Glencoe High School Math

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Chapter 0

Preparing for Algebra

Textbook section	IXL skills
0.1: Plan for Problem Solving	O.1 Word problems: mixed review >>
0.2: Real Numbers	A.6 Square roots >> A.8 Sort rational and irrational numbers >> A.9 Classify rational and irrational numbers >> A.10 Classify numbers >>
0.3: Operations with Integers	A.2 Absolute value and opposites >> B.1 Add, subtract, multiply, and divide integers >>
0.4: Adding and Subtracting Rational Numbers	A.1 Compare and order rational numbers >> B.4 Add and subtract rational numbers >>
0.5: Multiplying and Dividing Rational Numbers	B.5 Multiply and divide rational numbers >>
0.6: The Percent Proportion	D.2 Solve percent equations >> D.3 Percent word problems >>
0.7: Perimeter	F.1 Perimeter >>
0.8: Area	
0.9: Volume	
0.1: Surface Area	
0.11: Simple Probability and Odds	JJ.1 Theoretical probability >> JJ.7 Counting principle >>
0.12: Measures of Center, Variation, and Position	KK.2 Mean, median, mode, and range >> KK.3 Quartiles >> KK.4 Identify an outlier >> KK.5 Identify an outlier and describe the effect of removing it >>

0.13: Representing Data

- N.1** Interpret bar graphs, line graphs, and histograms >>
 - N.2** Create bar graphs, line graphs, and histograms >>
 - N.4** Interpret stem-and-leaf plots >>
 - N.5** Interpret box-and-whisker plots >>
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Chapter 1

Expressions, Equations, and Functions

Textbook section	IXL skills	
1.1: Variables and Expressions	I.1	Write variable expressions >>
1.2: Order of Operations	B.2	Evaluate numerical expressions involving integers >>
	B.3	Evaluate variable expressions involving integers >>
1.3: Properties of Numbers	H.1	Properties of addition and multiplication >>
	H.4	Properties of equality >>
1.4: The Distributive Property	H.2	Distributive property >>
	H.3	Simplify variable expressions using properties >>
	I.2	Simplify variable expressions involving like terms and the distributive property >>
	I.3	Identify equivalent linear expressions >>
1.5: Equations	I.7	Solve equations using order of operations >>
	J.5	Solve advanced linear equations >>
	J.6	Solve equations with variables on both sides >>
1.6: Relations	Q.1	Relations: convert between tables, graphs, mappings, and lists of points >>
	Q.2	Domain and range of relations >>
1.7: Functions	Q.4	Identify functions >>
	Q.5	Identify functions: vertical line test >>
	Q.7	Evaluate a function >>
1.8: Interpreting Graphs of Functions		

Chapter 2

Linear Equations

Textbook section	IXL skills
2.1: Writing Equations	I.4 Write variable equations >> S.12 Write linear functions to solve word problems >>
2.2: Solving One-Step Equations	J.3 Solve one-step linear equations >>
2.3: Solving Multi-Step Equations	J.4 Solve two-step linear equations >> J.5 Solve advanced linear equations >> J.10 Solve linear equations: word problems >> J.11 Solve linear equations: mixed review >> O.3 Consecutive integer problems >>
2.4: Solving Equations with the Variable on Each Side	J.6 Solve equations with variables on both sides >> J.7 Solve equations: complete the solution >> J.8 Find the number of solutions >> J.9 Create equations with no solutions or infinitely many solutions >>
2.5: Solving Equations Involving Absolute Value	L.1 Solve absolute value equations >> L.2 Graph solutions to absolute value equations >>
2.6: Ratios and Proportions	C.1 Identify equivalent ratios >> C.2 Write an equivalent ratio >> C.5 Solve proportions >> C.6 Solve proportions: word problems >> C.7 Scale drawings: word problems >>
2.7: Percent of Change	D.4 Percent of change >> D.5 Percent of change: word problems >>
2.8: Literal Equations and Dimensional Analysis	I.8 Rearrange multi-variable equations >>
2.9: Weighted Averages	O.5 Weighted averages: word problems >>

Chapter 3

Linear Functions

Textbook section	IXL skills
3.1: Graphing Linear Equations	S.1 Identify linear functions >> S.13 Complete a table and graph a linear function >> S.16 Standard form: find x- and y-intercepts >> S.17 Standard form: graph an equation >>
3.2: Solving Linear Equations by Graphing	
3.3: Rate of Change and Slope	S.2 Find the slope of a graph >> S.3 Find the slope from two points >> S.4 Find a missing coordinate using slope >>
3.4: Direct Variation	R.2 Find the constant of variation >> R.3 Graph a proportional relationship >> R.4 Write direct variation equations >> R.5 Write and solve direct variation equations >>
3.5: Arithmetic Sequences as Linear Functions	P.2 Arithmetic sequences >> P.5 Write variable expressions for arithmetic sequences >>
3.6: Proportional and Nonproportional Relationships	R.1 Identify proportional relationships >>

Chapter 4

Equations of Linear Functions

Textbook section	IXL skills
4.1: Graphing Equations in Slope-Intercept Form	S.5 Slope-intercept form: find the slope and y-intercept >>
	S.6 Slope-intercept form: graph an equation >>
	S.7 Slope-intercept form: write an equation from a graph >>
4.2: Writing Equations in Slope-Intercept Form	S.8 Slope-intercept form: write an equation >>
	S.9 Slope-intercept form: write an equation from a table >>
	S.10 Slope-intercept form: write an equation from a word problem >>
4.3: Writing Equations in Point-Slope Form	S.20 Point-slope form: graph an equation >>
	S.21 Point-slope form: write an equation >>
	S.22 Point-slope form: write an equation from a graph >>
4.4: Parallel and Perpendicular Lines	S.23 Slopes of parallel and perpendicular lines >>
	S.24 Write an equation for a parallel or perpendicular line >>
4.5: Scatter Plots and Lines of Fit	KK.8 Interpret a scatter plot >>
	KK.12 Scatter plots: line of best fit >>
4.6: Regression and Median-Fit Lines	KK.10 Match correlation coefficients to scatter plots >>
	KK.11 Calculate correlation coefficients >>
	KK.13 Find the equation of a regression line >>
	KK.14 Interpret regression lines >>
	KK.15 Analyze a regression line of a data set >>
4.7: Inverse Linear Functions	

Chapter 5

Linear Inequalities

Textbook section	IXL skills
5.1: Solving Inequalities by Addition and Subtraction	K.1 Graph inequalities >>
	K.2 Write inequalities from graphs >>
	K.4 Solve one-step linear inequalities: addition and subtraction >>
5.2: Solving Inequalities by Multiplication and Division	K.5 Solve one-step linear inequalities: multiplication and division >>
	K.6 Solve one-step linear inequalities >>
	K.7 Graph solutions to one-step linear inequalities >>
5.3: Solving Multi-Step Inequalities	K.8 Solve two-step linear inequalities >>
	K.9 Graph solutions to two-step linear inequalities >>
	K.10 Solve advanced linear inequalities >>
	K.11 Graph solutions to advanced linear inequalities >>
5.4: Solving Compound Inequalities	K.12 Graph compound inequalities >>
	K.13 Write compound inequalities from graphs >>
	K.14 Solve compound inequalities >>
	K.15 Graph solutions to compound inequalities >>
5.5: Inequalities Involving Absolute Value	
5.6: Graphing Inequalities in Two Variables	T.1 Does (x, y) satisfy the inequality? >>
	T.2 Linear inequalities: solve for y >>
	T.3 Graph a two-variable linear inequality >>
	T.4 Linear inequalities: word problems >>

Chapter 6

Systems of Linear Equations and Inequalities

Textbook section	IXL skills	
6.1: Graphing Systems of Equations	U.1	Is (x, y) a solution to the system of equations? >>
	U.2	Solve a system of equations by graphing >>
	U.3	Solve a system of equations by graphing: word problems >>
	U.4	Find the number of solutions to a system of equations by graphing >>
	U.6	Classify a system of equations by graphing >>
6.2: Substitution	U.8	Solve a system of equations using substitution >>
	U.9	Solve a system of equations using substitution: word problems >>
6.3: Elimination Using Addition and Subtraction		
6.4: Elimination Using Multiplication	U.5	Find the number of solutions to a system of equations >>
	U.7	Classify a system of equations >>
	U.10	Solve a system of equations using elimination >>
	U.11	Solve a system of equations using elimination: word problems >>
6.5: Applying Systems of Linear Equations	U.14	Solve a system of equations using any method >>
	U.15	Solve a system of equations using any method: word problems >>
6.6: Systems of Inequalities	T.5	Is (x, y) a solution to the system of inequalities? >>
	T.6	Solve systems of linear inequalities by graphing >>

Chapter 7

Exponents and Exponential Functions

Textbook section	IXL skills
7.1: Multiplication Properties of Exponents	Y.1 Identify monomials >> Y.2 Multiply monomials >> Y.5 Powers of monomials >>
7.2: Division Properties of Exponents	V.3 Negative exponents >> V.4 Multiplication with exponents >> V.5 Division with exponents >> V.6 Multiplication and division with exponents >> V.7 Power rule >> Y.3 Divide monomials >> Y.4 Multiply and divide monomials >>
7.3: Rational Exponents	V.10 Evaluate integers raised to rational exponents >>
7.4: Scientific Notation	W.1 Convert between standard and scientific notation >> W.3 Multiply numbers written in scientific notation >> W.4 Divide numbers written in scientific notation >>
7.5: Exponential Functions	X.2 Match exponential functions and graphs >> X.3 Domain and range of exponential functions: graphs >> X.4 Domain and range of exponential functions: equations >>
7.6: Growth and Decay	X.5 Exponential growth and decay: word problems >>
7.7: Geometric Sequences as Exponential Functions	P.1 Identify arithmetic and geometric sequences >> P.3 Geometric sequences >> P.6 Write variable expressions for geometric sequences >>

7.8: Recursive Formulas

Chapter 8

Quadratic Expressions and Equations

Textbook section	IXL skills
8.1: Adding and Subtracting Polynomials	Z.1 Polynomial vocabulary >>
	Z.3 Add and subtract polynomials using algebra tiles >>
	Z.4 Add and subtract polynomials >>
	Z.5 Add polynomials to find perimeter >>
8.2: Multiplying a Polynomial by a Monomial	Z.6 Multiply a polynomial by a monomial >>
8.3: Multiplying Polynomials	Z.7 Multiply two polynomials using algebra tiles >>
	Z.8 Multiply two binomials >>
8.4: Special Products	Z.9 Multiply two binomials: special cases >>
	Z.10 Multiply polynomials >>
8.5: Using the Distributive Property	AA.1 GCF of monomials >>
	AA.2 Factor out a monomial >>
8.6: Solving $x^2 + bx + c = 0$	AA.4 Factor quadratics with leading coefficient 1 >>
	BB.6 Solve a quadratic equation using the zero product property >>
8.7: Solving $ax^2 + bx + c = 0$	AA.3 Factor quadratics using algebra tiles >>
	AA.5 Factor quadratics with other leading coefficients >>
8.8: Differences of Squares	
8.9: Perfect Squares	AA.6 Factor quadratics: special cases >>
	AA.8 Factor polynomials >>
	BB.7 Solve a quadratic equation by factoring >>

Chapter 9

Quadratic Functions and Equations

Textbook section	IXL skills
9.1: Graphing Quadratic Functions	BB.1 Characteristics of quadratic functions >> BB.2 Complete a function table: quadratic functions >> BB.12 Match quadratic functions and graphs >>
9.2: Solve Quadratic Equations by Graphing	
9.3: Transformations of Quadratic Functions	BB.3 Transformations of quadratic functions >> BB.4 Graph quadratic functions in vertex form >>
9.4: Solving Quadratic Equations by Completing the Square	BB.8 Complete the square >> BB.9 Solve a quadratic equation by completing the square >>
9.5: Solving Quadratic Equations by Using the Quadratic Formula	BB.10 Solve a quadratic equation using the quadratic formula >> BB.11 Using the discriminant >>
9.6: Analyzing Functions with Successive Differences	CC.1 Identify linear, quadratic, and exponential functions from graphs >> CC.2 Identify linear, quadratic, and exponential functions from tables >> CC.3 Write linear, quadratic, and exponential functions >>
9.7: Special Functions	DD.1 Complete a function table: absolute value functions >> DD.2 Graph an absolute value function >> DD.3 Domain and range of absolute value functions: graphs >> DD.5 Transformations of absolute value functions >>

Chapter 10

Radical Functions and Geometry

Textbook section	IXL skills	
10.1: Square Root Functions	FF.2	Domain and range of radical functions: graphs >>
	FF.3	Domain and range of radical functions: equations >>
10.2: Simplifying Radical Expressions	EE.1	Simplify radical expressions >>
	EE.2	Simplify radical expressions with variables >>
	EE.7	Divide radical expressions >>
10.3: Operations with Radical Expressions	EE.4	Multiply radical expressions >>
	EE.5	Add and subtract radical expressions >>
	EE.6	Simplify radical expressions using the distributive property >>
	EE.8	Simplify radical expressions: mixed review >>
10.4: Radical Equations	FF.4	Solve radical equations I >>
	FF.5	Solve radical equations II >>
10.5: The Pythagorean Theorem	F.14	Pythagorean theorem >>
	F.15	Pythagorean theorem: word problems >>
	F.16	Converse of the Pythagorean theorem: is it a right triangle? >>
10.6: Trigonometric Ratios	HH.1	Trigonometric ratios: sin, cos, and tan >>
	HH.2	Find trigonometric ratios using a calculator >>
	HH.3	Inverses of trigonometric functions >>
	HH.4	Trigonometric ratios: find a side length >>
	HH.5	Trigonometric ratios: find an angle measure >>
	HH.6	Solve a right triangle >>

Chapter 11

Rational Functions and Equations

Textbook section	IXL skills
11.1: Inverse Variation	R.6 Identify direct variation and inverse variation >>
	R.7 Write inverse variation equations >>
	R.8 Write and solve inverse variation equations >>
11.2: Rational Functions	GG.1 Rational functions: asymptotes and excluded values >>
11.3: Simplifying Rational Expressions	GG.3 Simplify rational expressions >>
11.4: Multiplying and Dividing Rational Expressions	GG.4 Multiply and divide rational expressions >>
11.5: Dividing Polynomials	GG.5 Divide polynomials >>
11.6: Adding and Subtracting Rational Expressions	GG.6 Add and subtract rational expressions >>
11.7: Mixed Expressions and Complex Fractions	GG.2 Simplify complex fractions >>
11.8: Rational Equations	GG.7 Solve rational equations >>

Chapter 12

Statistics and Probability

Textbook section	IXL skills
12.1: Samples and Studies	KK.1 Identify biased samples >>
12.2: Statistics and Parameters	KK.6 Mean absolute deviation >> KK.7 Variance and standard deviation >>
12.3: Distributions of Data	N.5 Interpret box-and-whisker plots >>
12.4: Comparing Sets of Data	
12.5: Simulation	JJ.2 Experimental probability >>
12.6: Permutations and Combinations	JJ.6 Permutations >> JJ.7 Counting principle >> JJ.8 Permutation and combination notation >>
12.7: Probability of Compound Events	JJ.3 Compound events: find the number of outcomes >> JJ.4 Identify independent and dependent events >> JJ.5 Probability of independent and dependent events >>
12.8: Probability Distributions	