



IXL Skill Alignment

Pre-Algebra alignment for McDougal Littell Mathematics



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Unit 1

Integers, Equations, and Inequalities

Chapter 1: Variables, Expressions, and Integers

Textbook section	IXL skills
1.1: Expressions and Variables	Evaluate variable expressions <ol style="list-style-type: none">Evaluate one-variable expressions V77Evaluate multi-variable expressions QZT Write variable expressions <ol style="list-style-type: none">Write variable expressions: one operation PEZWrite variable expressions: word problems MEC
1.2: Powers and Exponents	<ol style="list-style-type: none">Understanding exponents VFVEvaluate exponents EYR
1.3: Order of Operations	<ol style="list-style-type: none">Identify mistakes involving the order of operations V46Evaluate numerical expressions involving rational numbers 5E3
1.4: Comparing and Ordering Integers	Number lines <ol style="list-style-type: none">Integers on number lines EZEGraph integers on horizontal and vertical number lines LFR Compare <ol style="list-style-type: none">Compare and order integers T2M Absolute value <ol style="list-style-type: none">Absolute value and opposite integers ABP
1.5: Adding Integers	
1.6: Subtracting Integers	<ol style="list-style-type: none">Add and subtract integers 6UWAdd and subtract three or more integers NB7Add and subtract integers: word problems XP7Integer addition and subtraction rules YDA

1.7: Multiplying and Dividing Integers

1. Integer multiplication and division rules XLP
2. Multiply and divide integers MDA
3. Evaluate numerical expressions involving integers Y6W

1.8: The Coordinate Plane

1. Coordinate plane review T6E
2. Quadrants and axes K77

Chapter 2: Solving Equations

Textbook section	IXL skills
2.1: Properties and Operations	
2.2: The Distributive Property	<ol style="list-style-type: none"> 1. Multiply using the distributive property U7T 2. Properties of addition and multiplication TYL 3. Write equivalent expressions using properties QFJ
2.3: Simplifying Variable Expressions	<p>Identify equivalent expressions</p> <ol style="list-style-type: none"> 1. Identify equivalent linear expressions I RUK 2. Identify equivalent linear expressions II YP8 3. Identify equivalent linear expressions: word problems 7YG <p>Terms and coefficients</p> <ol style="list-style-type: none"> 4. Identify terms and coefficients T8K <p>Add and subtract</p> <ol style="list-style-type: none"> 5. Add and subtract like terms QP7 6. Add and subtract linear expressions QCY
2.4: Variables and Equations	<ol style="list-style-type: none"> 1. Write an equation from words F6R 2. Which x satisfies an equation? BVQ
2.5: Solving Equations Using Addition or Subtraction	
2.6: Solving Equations Using Multiplication or Division	<ol style="list-style-type: none"> 1. Solve one-step equations 5J4 2. Properties of equality 7WL

2.7: Decimal Operations and Equations with Decimals

Add and subtract

1. Add and subtract decimals BP2
2. Add and subtract decimals: word problems RKZ

Multiply and divide

3. Multiply decimals TCU
4. Multiply decimals and whole numbers: word problems VZN
5. Divide decimals 6HB
6. Divide decimals by whole numbers: word problems TUU

Mixed operations

7. Add, subtract, multiply, and divide decimals: word problems TGN

Chapter 3: Multi-Step Equations and Inequalities

Textbook section	IXL skills
3.1: Solving Two-Step Equations	<ol style="list-style-type: none"> 1. Solve two-step equations JXD 2. Model and solve equations using algebra tiles D45
3.2: Solving Equations Having Like Terms and Parentheses	<ol style="list-style-type: none"> 1. Solve equations involving like terms Q2B 2. Solve multi-step equations 55K
3.3: Solving Equations with Variables on Both Sides	<ol style="list-style-type: none"> 1. Solve equations with variables on both sides ZYL 2. Solve equations: mixed review HZZ 3. Solve equations: complete the solution PGH 4. Solve one-step and two-step equations: word problems HCP
3.4: Solving Inequalities Using Addition or Subtraction	<ol style="list-style-type: none"> 1. Solutions to inequalities G2U 2. Graph inequalities on number lines 7LF 3. Write inequalities from number lines YW9
3.5: Solving Inequalities Using Multiplication or Division	<ol style="list-style-type: none"> 1. Solve one-step inequalities BSF 2. Graph solutions to one-step inequalities TMX



3.6: Solving Multi-step Inequalities

Two-step

1. Solve two-step inequalities N9D
2. Graph solutions to two-step inequalities WHT

Multi-step

3. Solve multi-step inequalities 6AZ
 4. Graph solutions to multi-step inequalities HKW
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Unit 2

Rational Numbers and Proportions

Chapter 4: Factors, Fractions and Exponents

Textbook section	IXL skills
4.1: Factors and Prime Factorization	1. Prime or composite JYA 2. Prime factorization YVA 3. Factors 7K3
4.2: Greatest Common Factor	1. Greatest common factor 3M8
4.3: Equivalent Fractions	1. Write fractions in lowest terms ZGT
4.4: Least Common Multiple	1. Least common multiple 2QK 2. GCF and LCM: word problems E62
4.5: Rules of Exponents	1. Multiplication with exponents EQY 2. Division with exponents M2C
4.6: Negative and Zero Exponents	1. Understanding negative exponents YBB
4.7: Scientific Notation	1. Convert between standard and scientific notation H8A 2. Compare numbers written in scientific notation RHT 3. Multiply numbers written in scientific notation YZU

Chapter 5: Rational Numbers and Equations

Textbook section	IXL skills
5.1: Rational Numbers	1. Compare rational numbers MUK 2. Put rational numbers in order QP5 3. Convert between decimals and fractions or mixed numbers 2RC
5.2: Adding and Subtracting Like Fractions	

5.3: Adding and Subtracting Unlike Fractions

1. Add and subtract positive and negative fractions SD2

5.4: Multiplying Fractions**5.5:** Dividing Fractions

1. Multiply and divide positive and negative fractions 2B5

5.6: Using Multiplicative Inverses to Solve Equations

1. Reciprocals and multiplicative inverses 8MF

5.7: Equations and Inequalities with Rational Numbers**Chapter 6: Ratio, Proportion, and Probability****Textbook section****IXL skills****6.1:** Ratios and Rates**Understand ratios**

1. Understanding ratios X45
2. Word problems involving ratios 8AT

Equivalent ratios

3. Identify equivalent ratios ZVD
4. Write an equivalent ratio MQS
5. Equivalent ratios: word problems RX2

Unit rates

6. Unit rates 59J

6.2: Writing and Solving Proportions

1. Solve proportions: word problems 5XV
2. Solve proportions BNY

6.3: Solving Proportions Using Cross Products

1. Do the ratios form a proportion? QBJ
2. Do the ratios form a proportion: word problems JHP

6.4: Similar and Congruent Figures

1. Congruence statements and corresponding parts LPP
2. Side lengths and angle measures of congruent figures DSQ
3. Similar and congruent figures U85

6.5: Similarity and Measurement

1. Side lengths and angle measures of similar figures 79Y
2. Find missing side lengths in proportional triangles P5W

6.6: Scale Drawings

1. Scale drawings: word problems Q5W
2. Scale drawings: scale factor word problems Z9T

6.7: Probability and Odds

1. Experimental probability FRL
2. Probability of simple events 5ZY

6.8: The Counting Principle

1. Counting principle CNQ

Chapter 7: Percents**Textbook section****IXL skills****7.1: Percents and Fractions**

1. Compare percents to fractions and decimals 22V
2. Percents of numbers and money amounts ZGA
3. Percents of numbers: word problems JNT

7.2: Percents and Proportions

1. Find what percent one number is of another JMG
2. Find what percent one number is of another: word problems ARV

7.3: Percents and Decimals

1. Convert between percents, fractions, and decimals 6PB

7.4: The Percent Equation

1. Solve percent equations UAN

7.5: Percent of Change

1. Percent of change NYH
2. Percent of change: word problems YHP

7.6: Percent Applications

1. Percent of a number: tax, discount, and more KZZ
2. Find the percent: tax, discount, and more KCF
3. Sale prices: find the original price 5P4
4. Multi-step problems with percents XXP

7.7: Simple and Compound Interest

1. Simple interest YAT
2. Compound interest LSK

Unit 3

Functions, Geometry, and Measurement

Chapter 8: Linear Functions

Textbook section	IXL skills
8.1: Relations and Functions	<ol style="list-style-type: none"> 1. Identify functions ELJ 2. Identify functions: graphs AEB 3. Domain and range of functions JZD
8.2: Linear Equations in Two Variables	<ol style="list-style-type: none"> 1. Does (x, y) satisfy the linear function? 5BD 2. Complete a table for a linear function D9B 3. Complete a table and graph a linear function DC2
8.3: Using Intercepts	<ol style="list-style-type: none"> 1. Standard form: find x- and y-intercepts 8SN 2. Write linear functions: word problems YK6
8.4: The Slope of a Line	<ol style="list-style-type: none"> 1. Find the slope of a graph D7M 2. Find the slope from two points ZAC
8.5: Slope-Intercept Form	<ol style="list-style-type: none"> 1. Slope-intercept form: find the slope and y-intercept U55 2. Graph a line from an equation in slope-intercept form W5E 3. Slopes of parallel and perpendicular lines PRP
8.6: Writing Linear Equations	<p>Slope and a point</p> <ol style="list-style-type: none"> 1. Write a linear equation from a slope and y-intercept WHP 2. Write a linear equation from a slope and a point VKP <p>Graph</p> <ol style="list-style-type: none"> 3. Write a linear equation from a graph WHM <p>Points</p> <ol style="list-style-type: none"> 4. Write a linear equation from two points 2R9 5. Write a linear function from a table UYY

8.7: Function Notation

8.8: Systems of Linear Equations

1. Is (x, y) a solution to the system of equations? N46
2. Solve a system of equations by graphing WV5
3. Solve a system of equations by graphing: word problems W9J
4. Find the number of solutions to a system of equations by graphing AGZ

8.9: Graphs of Linear Inequalities

1. Does (x, y) satisfy the inequality? N9L
2. Graph a two-variable linear inequality HHP
3. Linear inequalities: word problems ZAY

Chapter 9: Real Numbers and Right Triangles

Textbook section

IXL skills

9.1: Square Roots

Squares and square roots

1. Square roots of perfect squares 9RS
2. Relationship between squares and square roots 8W2

Positive square roots

3. Estimate positive square roots XWJ

Evaluate radical expressions

4. Evaluate radical expressions D8J

Positive and negative square roots

5. Positive and negative square roots 8TF
6. Estimate positive and negative square roots 96T

9.2: Simplifying Square Roots

1. Simplify radical expressions ZFF
2. Simplify radical expressions with variables 82V
3. Simplify radical expressions involving fractions VRZ

9.3: The Pythagorean Theorem

Sides of a triangle

1. Pythagorean theorem: find the length of the hypotenuse 7ZL
2. Pythagorean theorem: find the missing leg length Y9C

- Pythagorean theorem: find the missing leg or hypotenuse length MTM

Applications

- Pythagorean theorem: word problems 87U

Converse

- Converse of the Pythagorean theorem: is it a right triangle? EQZ

9.4: Real Numbers

- Identify rational and irrational numbers NV6

9.5: The Distance and Midpoint Formula

- Find the distance between two points ZBP
- Midpoint formula: find the midpoint UQE

9.6: Special Right Triangles

- Special right triangles E9S

9.7: The Tangent Ratio

9.8: The Sine and Cosine Ratios

- Trigonometric ratios: sin, cos, and tan NH8
- Trigonometric ratios: find a side length 65V

Chapter 10: Measurement, Area, and Volume

Textbook section	IXL skills
10.1: Triangles	<ol style="list-style-type: none"> Classify triangles J9M
10.2: Polygons and Quadrilaterals	<ol style="list-style-type: none"> Identify and classify polygons NSE Identify trapezoids NCM Classify quadrilaterals I VNF
10.3: Areas of Parallelograms and Trapezoids	<ol style="list-style-type: none"> Area of rectangles and parallelograms 62H Area of triangles and trapezoids ENE
10.4: Circumference and Area of a Circle	<ol style="list-style-type: none"> Parts of a circle KZB Area and circumference of circles CHV Circles: word problems Q8V
10.5: Surface Area of Prisms and Cylinders	<ol style="list-style-type: none"> Surface area of cylinders FGU

10.6: Surface Area of Pyramids and Cones

1. Surface area of cubes, prisms, and pyramids ZT6
2. Surface area of cones 5E6

10.7: Volumes of Prisms and Cylinders

1. Volume of cylinders 9F3

10.8: Volumes of Pyramids and Cones

1. Volume of cubes, prisms, and pyramids JUB
2. Volume of cones YXR

Unit 4

Data Analysis, Polynomials and Transformations

Chapter 11: Data Analysis and Probability

Textbook section	IXL skills
11.1: Stem-and-Leaf Plots and Histograms	<p>Stem-and-leaf plots</p> <ol style="list-style-type: none"> 1. Create stem-and-leaf plots PN9 2. Interpret stem-and-leaf plots WKY <p>Histogram</p> <ol style="list-style-type: none"> 3. Create histograms XLV 4. Interpret histograms HVL <p>Frequency charts</p> <ol style="list-style-type: none"> 5. Create frequency charts LT2
11.2: Box-and-Whisker Plots	<ol style="list-style-type: none"> 1. Box plots YVZ
11.3: Using Data Displays	
11.4: Collecting Data	<ol style="list-style-type: none"> 1. Identify representative, random, and biased samples CSR
11.5: Interpreting Data	<ol style="list-style-type: none"> 1. Interpret tables LVG 2. Interpret bar graphs M83
11.6: Permutations	<ol style="list-style-type: none"> 1. Permutations ZN6 2. Factorials WTX
11.7: Combinations	<ol style="list-style-type: none"> 1. Combination and permutation notation FUJ
11.8: Probabilities of Disjoint and Overlapping Events	<ol style="list-style-type: none"> 1. Probability of opposite, mutually exclusive, and overlapping events DCL
11.9: Independent and Dependent Events	<ol style="list-style-type: none"> 1. Identify independent and dependent events SRF 2. Probability of independent and dependent events SAS

Chapter 12: Polynomials and Nonlinear Functions

Textbook section	IXL skills
12.1: Polynomials	<ol style="list-style-type: none">1. Identify monomials <small>KMC</small>2. Polynomial vocabulary <small>MTT</small>
12.2: Adding and Subtracting Polynomials	<ol style="list-style-type: none">1. Add and subtract polynomials using algebra tiles <small>DPQ</small>2. Add and subtract polynomials <small>W75</small>
12.3: Multiplying Monomials and Polynomials	<ol style="list-style-type: none">1. Multiply monomials <small>TR9</small>2. Multiply a polynomial by a monomial <small>G2G</small>
12.4: Multiplying Binomials	<ol style="list-style-type: none">1. Multiply polynomials using algebra tiles <small>W87</small>2. Multiply polynomials <small>JB7</small>3. Multiply polynomials to find area <small>YQ7</small>
12.5: Other Rules of Exponents	<ol style="list-style-type: none">1. Power rule <small>AEQ</small>2. Evaluate expressions using properties of exponents <small>UTY</small>
12.6: Quadratic Functions	<ol style="list-style-type: none">1. Complete a function table: quadratic functions <small>LFV</small>
12.7: Exponential Growth and Decay	<ol style="list-style-type: none">1. Exponential growth and decay: word problems <small>UKG</small>
12.8: Sequences	<ol style="list-style-type: none">1. Identify arithmetic and geometric sequences <small>YVB</small>2. Arithmetic sequences <small>Y75</small>3. Geometric sequences <small>EGQ</small>4. Number sequences: mixed review <small>LVF</small>5. Write variable expressions for arithmetic sequences <small>EX2</small>

Chapter 13: Angle Relationships and Transformations

Textbook section	IXL skills
13.1: Angle Relationships	<ol style="list-style-type: none"> 1. Identify complementary, supplementary, vertical, adjacent, and congruent angles HGV 2. Find measures of complementary, supplementary, vertical, and adjacent angles R2B
13.2: Angles and Parallel Lines	<ol style="list-style-type: none"> 1. Transversals of parallel lines: name angle pairs ZLF 2. Transversals of parallel lines: find angle measures V99 3. Identify alternate interior and alternate exterior angles 8EM
13.3: Angles and Polygons	<p>Triangles</p> <ol style="list-style-type: none"> 1. Find missing angles in triangles JFJ <p>Quadrilaterals</p> <ol style="list-style-type: none"> 2. Find missing angles in quadrilaterals I N2R 3. Find missing angles in quadrilaterals II ZHN <p>Angles</p> <ol style="list-style-type: none"> 4. Exterior Angle Theorem FMP 5. Interior angles of polygons JBP
13.4: Translations	<ol style="list-style-type: none"> 1. Translations: graph the image XUS 2. Translations: find the coordinates RUP
13.5: Reflections and Symmetry	<ol style="list-style-type: none"> 1. Reflections over the x- and y-axes: graph the image 74Z 2. Reflections over the x- and y-axes: find the coordinates 5UM 3. Line symmetry F7Z
13.6: Rotations and Symmetry	<ol style="list-style-type: none"> 1. Rotational symmetry: amount of rotation FJK 2. Rotations: graph the image AC9 3. Rotations: find the coordinates HHS 4. Rotational symmetry 7AW

13.7: Dilations

1. Dilations: graph the image 9T4
 2. Dilations: find the coordinates UV9
 3. Dilations: scale factor and classification 8NK
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