



IXL Skill Alignment

7th grade alignment for Miami-Dade County Public Schools



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Topic 1

Ratios & Proportional Reasoning

Florida Math Course 2: Chapter 1: Ratios and Proportional Reasoning

Standard	IXL skills
Lesson 1: Rates	<ol style="list-style-type: none"> Unit rates 2NB Unit prices N7G Compare rates: word problems VVS <p><i>Also consider</i></p> <ul style="list-style-type: none"> Identify equivalent ratios ZFM Write an equivalent ratio LQR Equivalent ratios: word problems DJ8 Unit prices with unit conversions KJ8
Lesson 2: Complex Fractions and Unit Rates	<ol style="list-style-type: none"> Calculate unit rates with fractions 57X Simplify complex fractions E9H <p><i>Also consider</i></p> <ul style="list-style-type: none"> Convert between percents and fractions AUT
Lesson 3: Convert Unit Rates	<ol style="list-style-type: none"> Convert rates and measurements: customary units 5F4 Convert rates and measurements: metric units QKM
Lesson 4: Proportional and Nonproportional Relationships	<ol style="list-style-type: none"> Find the constant of proportionality from a table LKZ Identify proportional relationships from tables 6V7 Write equations for proportional relationships from tables 6GU <p><i>Also consider</i></p> <ul style="list-style-type: none"> Complete a table from a proportional relationship equation XHV

Lesson 5: Graph Proportional Relationships

1. Identify proportional relationships from graphs and equations NB5
2. Identify proportional relationships by graphing AAN
3. Complete a table and graph a proportional relationship 5DR

Also consider

- Coordinate plane review VXU
- Interpret graphs of proportional relationships RMH
- Find the constant of proportionality from a graph ZUT
- Write equations for proportional relationships from graphs JKH

Lesson 6: Solve Proportional Relationships

1. Solve proportions TDA
2. Solve proportions: word problems WB7

Also consider

- Do the ratios form a proportion: word problems SHV
- Write and solve equations for proportional relationships VKK

Topic 2

Proportional Reasoning with Percents

Florida Math Course 2: Chapter 2: Percents

Standard	IXL skills
Lesson 1: Percent of a Number	1. Percents of numbers and money amounts 93K 2. Percents of numbers: word problems EXE <i>Also consider</i> <ul style="list-style-type: none"> Solve percent problems using strip models 9XC
Lesson 2: Percent and Estimation	1. Estimate percents of numbers 29D <i>Also consider</i> <ul style="list-style-type: none"> Estimate tips Y5R
Lesson 3: The Percent Proportion	1. Solve percent equations 67F
Lesson 4: The Percent Equation	1. Solve percent equations: word problems JS6
Lesson 5: Percent of Change	1. Percent of change BL7 2. Percent of change: word problems 54S 3. Percent error: word problems X9B <i>Also consider</i> <ul style="list-style-type: none"> Percent of change: find the original amount word problems RCM
Lesson 6: Sales Tax, Tips, and Markup	1. Tax, tip, and markup: word problems NK7
Lesson 7: Discount	1. Sale prices RH9 2. Sale prices: find the original price BDA 3. Which is the better coupon? QT6 <i>Also consider</i> <ul style="list-style-type: none"> Find the percent: tax, discount, and more PBM Multi-step problems with percents ZHX
Lesson 8: Financial Literacy: Simple Interest	1. Simple interest E7Y

Topic 3

Addition and Subtraction of Rational Numbers

Florida Math Course 2: Chapter 3: Integers

Standard	IXL skills
Lesson 1: Integers and Absolute Value	<ol style="list-style-type: none">1. Understanding integers YBC2. Graph integers on horizontal and vertical number lines EM83. Absolute value and opposite integers NSB <p><i>Also consider</i></p> <ul style="list-style-type: none">• Integers on number lines A5Y• Compare and order integers JX8• Understanding absolute value 6PJ
Lesson 2: Add Integers	<ol style="list-style-type: none">1. Add integers using number lines A632. Integer addition rules ERH3. Add integers QFU <p><i>Also consider</i></p> <ul style="list-style-type: none">• Add integers using counters FTM• Add three or more integers PBC• Quantities that combine to zero: word problems 7SP
Lesson 3: Subtract Integers	<ol style="list-style-type: none">1. Subtract integers using number lines FGG2. Integer subtraction rules QZA3. Subtract integers HEU <p><i>Also consider</i></p> <ul style="list-style-type: none">• Subtract integers using counters BGL• Integer addition and subtraction rules 6EV• Add and subtract integers FNS• Add and subtract integers: word problems 2DD• Complete addition and subtraction equations with integers P6A

Florida Math Course 2: Chapter 4: Rational Numbers

Standard	IXL skills
Lesson 1: Terminating and Repeating Decimals	<ol style="list-style-type: none"> Convert fractions or mixed numbers to decimals M2D
Lesson 2: Compare and Order Rational Numbers	<ol style="list-style-type: none"> Rational numbers on number lines HA9 Compare and order rational numbers using number lines 4D5 Compare rational numbers JVR Put rational numbers in order 28Y <p><i>Also consider</i></p> <ul style="list-style-type: none"> Classify rational numbers using a diagram 6KA Classify rational numbers LCS Convert between percents, fractions, and decimals 2HW
Lesson 3: Add and Subtract Like Fractions	<ol style="list-style-type: none"> Add and subtract positive and negative like fractions KHV
Lesson 4: Add and Subtract Unlike Fractions	<ol style="list-style-type: none"> Add and subtract positive and negative unlike fractions DFB <p><i>Also consider</i></p> <ul style="list-style-type: none"> Add and subtract positive and negative decimals WCZ Add and subtract rational numbers GKU
Lesson 5: Add and Subtract Mixed Numbers	<ol style="list-style-type: none"> Convert between mixed numbers and improper fractions LGK Add and subtract mixed numbers 9BE Add and subtract mixed numbers: word problems 6YT

Topic 4

Multiplication and Division of Rational Numbers

Florida Math Course 2: Chapter 3: Integers

Standard	IXL skills
Lesson 4: Multiply Integers	<ol style="list-style-type: none"> Understand multiplying by a negative integer using a number line NB8 Integer multiplication rules K7U Multiply integers DQT
Lesson 5: Divide Integers	<ol style="list-style-type: none"> Equal quotients of integers 2QY Integer division rules T9Q Divide integers CTV <p><i>Also consider</i></p> <ul style="list-style-type: none"> Multiply and divide integers R8D Complete multiplication and division equations with integers K94 Add, subtract, multiply, and divide integers B8A Evaluate numerical expressions involving integers 7YN Evaluate numerical expressions involving exponents D7P

Florida Math Course 2: Chapter 4: Rational Numbers

Standard	IXL skills
Lesson 6: Multiply Fractions	<ol style="list-style-type: none"> Multiply positive and negative fractions K6H Multiply fractions and mixed numbers: word problems 5NJ
Lesson 7: Convert Between Systems	<ol style="list-style-type: none"> Convert between customary and metric systems E8Z
Lesson 8: Divide Fractions	<ol style="list-style-type: none"> Divide positive and negative fractions 92N Divide fractions and mixed numbers: word problems 5VR

Also consider

- Multiplicative inverses GQG
 - Multiply and divide positive and negative decimals K7V
 - Multiply and divide rational numbers BXW
 - Add, subtract, multiply, and divide rational numbers QBF
 - Evaluate numerical expressions involving decimals FNM
 - Evaluate numerical expressions involving fractions XXQ
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Topic 5

Equivalent Expressions and Properties of Operations

Florida Math Course 2: Chapter 5: Expressions

Standard	IXL skills
Lesson 1: Algebraic Expressions	<ol style="list-style-type: none"> 1. Write variable expressions: word problems XMD 2. Evaluate variable expressions LKM 3. Evaluate nonlinear expressions ZHY <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Write variable expressions N48
Lesson 2: Sequences	<ol style="list-style-type: none"> 1. Arithmetic sequences CYC 2. Evaluate variable expressions for arithmetic sequences JZ8 3. Write variable expressions for arithmetic sequences AJD <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Shape patterns JUD
Lesson 3: Properties of Operations	<ol style="list-style-type: none"> 1. Properties of addition and multiplication MUV 2. Simplify expressions using properties AH7
Lesson 4: The Distributive Property	<ol style="list-style-type: none"> 1. Multiply using the distributive property: area models J8K 2. Multiply using the distributive property NUY 3. Write equivalent expressions using properties 6XR <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Identify equivalent linear expressions using algebra tiles 38V
Lesson 5: Simplify Algebraic Expressions	<ol style="list-style-type: none"> 1. Identify terms and coefficients E7H 2. Simplify expressions by combining like terms: with algebra tiles PCU 3. Simplify expressions by combining like terms JJG

Also consider

- Identify equivalent linear expressions I DRB
- Identify equivalent linear expressions II KAR
- Identify equivalent linear expressions: word problems KWH

Lesson 6: Add Linear Expressions

1. Add expressions RPY

Lesson 7: Subtract Linear Expressions

1. Subtract expressions KCX

Also consider

- Add and subtract linear expressions 6BT

Lesson 8: Factor Linear Expressions

1. Factor linear expressions: area models QRL
2. Factors of linear expressions J9G

Also consider

- Sort factors of variable expressions BUX
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Topic 6

Solving Equations and Inequalities

Florida Math Course 2: Chapter 6: Equations and Inequalities

Standard	IXL skills
Lesson 1: Solve One-Step Addition and Subtraction Equations	<ol style="list-style-type: none"> Solve one-step addition and subtraction equations VLA Solve one-step addition and subtraction equations with decimals, fractions, and mixed numbers DMB <p><i>Also consider</i></p> <ul style="list-style-type: none"> Which x satisfies an equation? DJS Write an equation from words N2T
Lesson 2: Solve One-Step Multiplication and Division Equations	<ol style="list-style-type: none"> Solve one-step multiplication and division equations LST <p><i>Also consider</i></p> <ul style="list-style-type: none"> Solve one-step equations WKM Solve one-step equations: word problems PTR
Lesson 3: Solve Equations with Rational Coefficients	<ol style="list-style-type: none"> Solve one-step multiplication and division equations with decimals, fractions, and whole numbers EEC
Lesson 4: Solve Two-Step Equations	<ol style="list-style-type: none"> Model and solve equations using algebra tiles EGK Write and solve equations that represent diagrams FVH Solve two-step equations without parentheses CMX
Lesson 5: More Two-Step Equations	<ol style="list-style-type: none"> Solve two-step equations with parentheses NSH Solve equations: complete the solution 66R Solve two-step equations: word problems D2Y <p><i>Also consider</i></p> <ul style="list-style-type: none"> Solve two-step equations QEB

Lesson 6: Solve Inequalities by Addition or Subtraction

1. Solve one-step addition and subtraction inequalities XPQ

Also consider

- Solutions to inequalities 8BA
- Graph inequalities on number lines VLU
- Write inequalities from number lines JNL

Lesson 7: Solve Inequalities by Multiplication or Division

1. Solve one-step multiplication and division inequalities 2YB
2. Graph solutions to one-step inequalities TFK
3. One-step inequalities: word problems 6HD

Also consider

- Solve one-step inequalities QWH

Lesson 8: Solve Two-Step Inequalities

1. Solve two-step inequalities XGQ
2. Graph solutions to two-step inequalities 6TT

Topic 7

Relationships in Geometric Figures

Florida Math Course 2: Chapter 7: Geometric Figures

Standard	IXL skills
Lesson 1: Classify Angles	<ol style="list-style-type: none"> Name, measure, and classify angles 2UG Identify vertical, adjacent, and congruent angles BCU Find measures of vertical and adjacent angles 2F6
Lesson 2: Complementary and Supplementary Angles	<ol style="list-style-type: none"> Identify complementary and supplementary angles XA6 Find measures of complementary and supplementary angles JL9 <p><i>Also consider</i></p> <ul style="list-style-type: none"> Write and solve equations using angle relationships DN9 Identify complementary, supplementary, vertical, and adjacent angles HKG Find measures of complementary, supplementary, vertical, and adjacent angles CST
Lesson 3: Triangles	<ol style="list-style-type: none"> Classify triangles N5Z Find missing angles in triangles 4U6 <p><i>Also consider</i></p> <ul style="list-style-type: none"> Triangle inequality 5RX
Lesson 4: Scale Drawings	<ol style="list-style-type: none"> Scale drawings: word problems 84H Scale drawings: scale factor word problems KCM <p><i>Also consider</i></p> <ul style="list-style-type: none"> Scale drawings of polygons WEA Perimeter and area: changes in scale ZC6
Lesson 5: Draw Three-Dimensional Figures	<ol style="list-style-type: none"> Front, side, and top view 9Q3

Lesson 6: Cross Sections

1. Bases of three-dimensional figures RF6
 2. Identify parallel, intersecting, and skew lines and planes WSU
 3. Cross sections of three-dimensional figures HFJ
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Topic 8

Geometry and Measurement

Florida Math Course 2: Chapter 8: Measure Figures

Standard	IXL skills
Lesson 1: Circumference	1. Circumference of circles 9FM <i>Also consider</i> <ul style="list-style-type: none"> Parts of a circle 2VL
Lesson 2: Area of Circles	1. Area of circles YA8 2. Circles: word problems P56 <i>Also consider</i> <ul style="list-style-type: none"> Area of semicircles and quarter circles 2NM
Lesson 3: Area of Composite Figures	1. Area of compound figures with triangles, semicircles, and quarter circles N97 2. Area between two shapes RKC
Lesson 4: Volume of Prisms	1. Volume of cubes and prisms URT <i>Also consider</i> <ul style="list-style-type: none"> Volume of cubes and rectangular prisms: word problems 8WV
Lesson 5: Volume of Pyramids	1. Volume of pyramids CKU
Lesson 6: Surface Area of Prisms	1. Surface area of cubes and prisms RFP <i>Also consider</i> <ul style="list-style-type: none"> Nets of prisms and pyramids GFP
Lesson 7: Surface Area of Pyramids	1. Surface area of pyramids XSJ
Lesson 8: Volume and Surface Area of Composite Figures	1. Volume of prisms: advanced EP5 <i>Also consider</i> <ul style="list-style-type: none"> Volume of irregular figures made of unit cubes 7CP

- Volume of compound figures 89U
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Topic 9

Probability

Florida Math Course 2: Chapter 9: Probability

Standard	IXL skills
Lesson 1: Probability of Simple Events	<ol style="list-style-type: none"> 1. Probability of simple, opposite, and mutually exclusive events 8SW 2. Probability of simple events: word problems NNM
Lesson 2: Theoretical and Experimental Probability	<ol style="list-style-type: none"> 1. Experimental probability 9AA 2. Make predictions using experimental probability WP6 <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Use collected data to find probabilities and make predictions VST • Make predictions using theoretical probability 9UW
Lesson 3: Probability of Compound Events	<ol style="list-style-type: none"> 1. Probability of compound events YPQ
Lesson 4: Simulations	<ol style="list-style-type: none"> 1. Which simulation represents the situation? D87
Lesson 5: Fundamental Counting Principle	<ol style="list-style-type: none"> 1. Compound events: find the number of outcomes HZR 2. Find the number of outcomes: word problems EKX <p><i>Also consider</i></p> <ul style="list-style-type: none"> • Compound events: find the number of sums SCV
Lesson 6: Permutations	<ol style="list-style-type: none"> 1. Permutations 7UB
Lesson 7: Independent and Dependent Events	<ol style="list-style-type: none"> 1. Identify independent and dependent events 9M6 2. Probability of independent and dependent events NED

Topic 10

Statistics

Florida Math Course 2: Chapter 10: Statistics

Standard	IXL skills
Lesson 1: Make Predictions	1. Estimate population size using proportions 3C9
Lesson 2: Unbiased and Biased Samples	1. Identify representative, random, and biased samples 5V3
Lesson 3: Misleading Graphs and Statistics	1. Interpret charts and graphs to find mean, median, mode, and range CYK <i>Also consider</i> <ul style="list-style-type: none"> Calculate mean, median, mode, and range U2A Calculate quartiles and interquartile range NZN
Lesson 4: Compare Populations	1. Compare populations using measures of center and spread PCK <i>Also consider</i> <ul style="list-style-type: none"> Interpret line plots W92 Box plots SKN
Lesson 5: Select and Appropriate Display	1. Choose the best type of graph RMW

Topic 11

FSA Standards Review

Standard	IXL skills
FSA Standards Review	Review skills from previous topics. Or, use the IXL Real-Time Diagnostic to receive a personalized action plan for each student.

Topic 12

Problem-Based Learning Investigations

7.NS: The Number System

Standard	IXL skills
<p>7.NS.1.1: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p>	<ol style="list-style-type: none"> 1. Add and subtract integers FNS 2. Add and subtract rational numbers GKU 3. Apply addition and subtraction rules Y8T
<p>7.NS.1.3: Solve real-world and mathematical problems involving the four operations with rational numbers.</p>	<ol style="list-style-type: none"> 1. Add and subtract integers: word problems 2DD 2. Add, subtract, multiply, and divide decimals: word problems TGN 3. Add, subtract, multiply, and divide fractions and mixed numbers: word problems KR7 4. Add, subtract, multiply, and divide money amounts: word problems HGN 5. Price lists CVW

7.G: Geometry

Standard	IXL skills
<p>7.G.1.2: Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p>	<ol style="list-style-type: none"> 1. Draw quadrilaterals WFE
<p>7.G.2.4: Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.</p>	<ol style="list-style-type: none"> 1. Circles: word problems P56

7.G.2.5: Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

1. Find measures of complementary, supplementary, vertical, and adjacent angles
CST

7.G.2.6: Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

1. Area of compound figures with triangles MRG
2. Area between two shapes RKC
3. Volume of cubes and rectangular prisms: word problems 8WV
4. Volume of compound figures 89U
5. Surface area of cubes and prisms RFP
6. Volume of prisms: advanced EP5

7.SP: Statistics and Probability

Standard

7.SP.3.7: Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.

IXL skills

1. Probability of simple events ZZB
2. Experimental probability 9AA

Topic 13

Transition to B.E.S.T.

Standard	IXL skills
A: Volume of Cylinders	1. Volume of cylinders FHC <i>Also consider</i> <ul style="list-style-type: none">Surface area of cylinders CYQ
