

Optional Independent Learning Summer 2022

How to use this Guide:

This guide can be used by parents and students who would like access to resources that will review the same material covered during the math block of middle school summer school. The resources are for Khan Academy, which is free of cost.

To access the resources, parents will need to create an account using an email address.

- [Khan Academy](#)

Once an account is created, each of the links below should go to either a specific lesson in a given platform or a set of lessons/activities covering the summer school material. Many summer school lessons combine activities or concepts from two different Illustrative Math lessons. Thus, in some cases the independent activities are listed as Part 1 or Part 2. Please note in some cases lessons do not have independent practice resources.

Grade 5 Reinforcement (Rising Grade 6)

Content		Khan Academy Resources
Week 1	Lesson 1 Share Sandwiches (5.NF.B.3) Lesson 2 Relate Division and Fractions(5.NF.B.3)	Grade 5 Lesson 1 and Lesson 2
Week 2	Lesson 3: Divide to Multiply Fractions (5.NF.B.3, 5.NF.B.4, 5.NF.B.4.a, 5.OA.A.2) Lesson 4: Lesson 4: Fractional Side Lengths (5.NF.B.3, 5.NF.B.4, 5.NF.B.4.b) Lesson 5: Multiply Fractions (5.NF.B.4, 5.NF.B.4.a, 5.NF.B.4.b) Lesson 6: Generalize Fraction Multiplication (5.NF.B.4, 5.NF.B.4.a, 5.NF.B.6) Lesson 7: Divide Whole Numbers by Unit Fractions and Unit Fractions by Whole Numbers (5.NF.B.7.a, 5.NF.B.7.b)	Grade 5 Lessons 3, Lesson 4, Lesson 5 Grade 5 Lesson 6 Grade 5 Lesson 7
Week 3	Lesson 8: Fraction Multiplication and Division Situations (5.NF.B.4, 5.NF.B.6, 5.NF.B.7, 5.NF.B.7.c) Lesson 9: Standard Algorithm: Multi-digit Numbers (5.NBT.B.5) Lesson 10: Divide Using Partial Quotients (5.NBT.B.6, 5.OA.A.2) Lesson 11: Represent and Compare Decimals (5.NBT.A, 5.NBT.A.1, 5.NBT.A.3.a, 5.NBT.A.3.b, 5.OA)	Grade 5 Lesson 8 Grade 5 Lesson 9 Grade 5 Lesson 10 Grade 5 Lesson 11
Week 4	Lesson 12: Add and Subtract Decimals (5.NBT.B.7) Lesson 13: Multiply Decimals and Whole Numbers (5.NBT.B.7, 5.OA.A, 5.OA.A.2) Lesson 14: Multiply Decimals (5.NBT.A.1, 5.NBT.B.7, 5.NF.B.4) Lesson 15: Divide Whole Numbers by Decimals (5.NBT.B.7)	Grade 5 Lesson 12 5 Lesson 13 and 14 Grade 5 Lesson 15

Grade 5/6 Reinforcement (Rising AIM)

Content		Khan Academy Resources
Week 1	Grade 5 Lesson 11: Represent and Compare Decimals (5.NBT.A, 5.NBT.A.1, 5.NBT.A.3.a, 5.NBT.A.3.b, 5.OA.A) Grade 5 Lesson 12: Add and Subtract Decimals (5.NBT.B.7)	Grade 5 Lesson 11 Grade 5 Lesson 12
Week 2	Lesson 13: Multiply Decimals and Whole Numbers (5.NBT.B.7, 5.OA.A, 5.OA.A.2) Lesson 14: Multiply Decimals (5.NBT.A.1, 5.NBT.B.7, 5.NF.B.4) Lesson 15: Divide Whole Numbers by Decimals (5.NBT.B.7) Lesson 16: Divide Decimals by Whole and Decimals (5.NBT.B.7) Grade 5 Lesson 17: Use Equivalent Expressions to Add and Subtract Fractions (5.NF.A.1, 5.NF.A.2)	Grade 5 Lesson 13 and 14 Grade 5 Lesson 15 and 16 Grade 5 Lesson 17
Week 3	Grade 5 Lesson 18: Subtract Fractions and Mixed Numbers (5.NF.A.1) Grade 5 Lesson 19: The Coordinate Grid (5.G.A.1) Lesson 1 Introducing Ratios and Diagrams (6.RP.A.1) Lesson 2 Recipes and Color Mixtures (6.RP.A.1)	Grade 6 Lesson 18 Grade 5 Lesson 19 Grade 6 Lesson 1 Grade 6 Lesson 2 Part 1 Grade 6 Lesson 2 Part 2
Week 4	Lesson 3: Equivalent Ratios (6.RP.A.1, 6.RP.A.3) Lesson 4: How Much for One? (6.RP.A.3, 6.RP.A.3.b) Lesson 5: Constant Speed and Comparing Situations (6.RP.A.3, 6.RP.A.3.b) Lesson 6: Tables of Equivalent Ratios (6.RP.A.3, 6.RP.A.3.a)	Grade 6 Lesson 3 Grade 6 Lesson 4 Part 1 Grade 6 Lesson 4 Part 2 Grade 6 Lesson 5 Part 1 Grade 6 Lesson 5 Part 2 Grade 6 Lesson 6 Part 1 Grade 6 Lesson 6 Part 2

Grade 5/6 Reinforcement (Rising AMP6+)

Content		Khan Academy Resources
Week 1	Grade 5 Lesson 11: Represent and Compare Decimals (5.NBT.A, 5.NBT.A.1, 5.NBT.A.3.a, 5.NBT.A.3.b, 5.OA.A) Grade 5 Lesson 12: Add and Subtract Decimals (5.NBT.B.7)	Grade 5 Lesson 11 Grade 5 Lesson 12
Week 2	Lesson 13: Multiply Decimals and Whole Numbers (5.NBT.B.7, 5.OA.A, 5.OA.A.2) Lesson 14: Multiply Decimals (5.NBT.A.1, 5.NBT.B.7, 5.NF.B.4) Lesson 15: Divide Whole Numbers by Decimals (5.NBT.B.7) Lesson 16: Divide Decimals by Whole and Decimals (5.NBT.B.7) Grade 5 Lesson 17: Use Equivalent Expressions to Add and Subtract Fractions (5.NF.A.1, 5.NF.A.2)	Grade 5 Lesson 13 and 14 Grade 5 Lesson 15 and 16 Grade 5 Lesson 17
Week 3	Grade 5 Lesson 18: Subtract Fractions and Mixed Numbers (5.NF.A.1) Grade 5 Lesson 19: The Coordinate Grid (5.G.A.1) Lesson 1 Introducing Ratios and Diagrams (6.RP.A.1) Lesson 2 Recipes and Color Mixtures (6.RP.A.1)	Grade 5 Lesson 18 Grade 5 Lesson 19 Grade 6 Lesson 1 Grade 6 Lesson 2 Part 1 Grade 6 Lesson 2 Part 2
Week 4	Lesson 3: Equivalent Ratios (6.RP.A.1, 6.RP.A.3) Lesson 4: How Much for One? (6.RP.A.3, 6.RP.A.3.b) Lesson 5: Constant Speed and Comparing Situations (6.RP.A.3, 6.RP.A.3.b) Lesson 6: Tables of Equivalent Ratios (6.RP.A.3, 6.RP.A.3.a)	Grade 6 Lesson 3 Grade 6 Lesson 4 Part 1 Grade 6 Lesson 4 Part 2 Grade 6 Lesson 5 Part 1 Grade 6 Lesson 5 Part 2 Grade 6 Lesson 6 Part 1 Grade 6 Lesson 6 Part 2

Grade 6 Reinforcement (Rising 7th)

Content		Khan Academy Resources
Week 1	Lesson 1 Introducing Ratios and Diagrams (6.RP.A.1) Lesson 2 Recipes and Color Mixtures (6.RP.A.1)	Grade 6 Lesson 1 Grade 6 Lesson 2 Part 1 Grade 6 Lesson 2 Part 2

Week 2	Lesson 3: Equivalent Ratios (6.RP.A.1, 6.RP.A.3) Lesson 4: How Much for One? (6.RP.A.3, 6.RP.A.3.b) Lesson 5: Constant Speed and Comparing Situations (6.RP.A.3, 6.RP.A.3.b) Lesson 6: Tables of Equivalent Ratios (6.RP.A.3, 6.RP.A.3.a) Lesson 7: Solving Equivalent Ratio Problems (6.RP.A.3, 6.RP.A.3.a)	Grade 6 Lesson 3 Grade 6 Lesson 4 Part 1 Grade 6 Lesson 4 Part 2 Grade 6 Lesson 5 Part 1 Grade 6 Lesson 5 Part 2 Grade 6 Lesson 6 Part 1 Grade 6 Lesson 6 Part 2 Grade 6 Lesson 7 Part 1 Grade 6 Lesson 7 Part 2
Week 3	Lesson 8: Equivalent Ratios Have the Same Unit Rates (6.RP.A.2, 6.RP.A.3, 6.RP.A.3.b) Lesson 9: What Are Percentages? (6.RP.A.3.c) Lesson 10: Percentages and Tape Diagrams (6.RP.A.3.c) Lesson 11: Solving Percentage Problems (6.RP.A.3, 6.RP.A.3.c)	Grade 6 Lesson 8 Grade 6 Lesson 10 Part 1 Grade 6 Lesson 10 Part 2 Grade 6 Lesson 11 Part 1 Grade 6 Lesson 11 Part 2
Week 4	Lesson 12: Understanding Equations (6.EE.B.5) Lesson 13: Solving Equations (6.EE.B, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7) Lesson 14: Representing Situations (6.EE.A.2.a, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.RP.A.3.c) Lesson 15: Equivalent Expressions (6.EE.A.4, 6.EE.B, 6.EE.B.6, 6.NS.B.3)	Grade 6 Lesson 12 Part 1 Grade 6 Lesson 12 Part 2 Grade 6 Lesson 13 Part 1 Grade 6 Lesson 13 Part 2 Grade 6 Lesson 14 Part 1 Grade 6 Lesson 14 Part 2 Grade 6 Lesson 15

AMP6+ Reinforcement (Rising AMP7+)

Content		Khan Academy Resources
Week 1	Lesson 9: What Are Percentages? (6.RP.A.3.c) Lesson 10: Percentages and Tape Diagrams (6.RP.A.3.c)	Grade 6 Lesson 10 Part 1 Grade 6 Lesson 10 Part 2
Week 2	Lesson 11: Solving Percentage Problems (6.RP.A.3, 6.RP.A.3.c) Lesson 12: Understanding Equations (6.EE.B.5) Lesson 13: Solving Equations (6.EE.B, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7) Lesson 14: Representing Situations (6.EE.A.2.a, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.RP.A.3.c) Lesson 15: Equivalent Expressions (6.EE.A.4, 6.EE.B, 6.EE.B.6, 6.NS.B.3)	Grade 6 Lesson 11 Part 1 Grade 6 Lesson 11 Part 2 Grade 6 Lesson 12 Part 1 Grade 6 Lesson 12 Part 2 Grade 6 Lesson 13 Part 1 Grade 6 Lesson 13 Part 2 Grade 6 Lesson 14 Part 1 Grade 6 Lesson 14 Part 2 Grade 6 Lesson 15

Week 3	<p>Lesson 1: Representing Proportional Relationships with Tables (7.RP.A.2, 7.RP.A.2.a, 7.RP.A.2.b)</p> <p>Lesson 2: Representing Proportional Relationships with Equations (5.NBT.B.7, 7.RP.A.2, 7.RP.A.2.c)</p> <p>Lesson 3: Comparing Proportional and Non-Proportional Relationships (7.G.B.6, 7.RP.A.2)</p> <p>Lesson 4: Graphing Proportional Relationships (7.RP.A.2, 7.RP.A.2.d)</p>	<p>Grade 7 Lesson 1</p> <p>Grade 7 Lesson 2 Part 1</p> <p>Grade 7 Lesson 2 Part 2</p> <p>Grade 7 Lesson 3</p> <p>Grade 7 Lesson 4 Part 1</p> <p>Grade 7 Lesson 4 Part 2</p>
Week 4	<p>Lesson 5: Using Proportional Graphs (7.RP.A.2)</p> <p>Lesson 6: Proportional Relationship with Fractions and Decimals (7.NS.A.2.d, 7.RP.A.2)</p> <p>Lesson 7: Percent Increase and Decrease (7.RP.A.3)</p> <p>Lesson 8: Applications of Percentages (7.RP.A.3)</p>	<p>Grade 7 Lesson 5 Part 1</p> <p>Grade 7 Lesson 5 Part 2</p> <p>Grade 7 Lesson 6</p> <p>Grade 7 Lesson 7</p> <p>Grade 7 Lesson 8 Part 1</p> <p>Grade 7 Lesson 8 Part 2</p> <p>Grade 7 Lesson 8 Part 3</p>

Grade 6 Reinforcement (Rising Inv. in Math)

Content		Khan Academy Resources
Week 1	<p>Lesson 1 Introducing Ratios and Diagrams (6.RP.A.1)</p> <p>Lesson 2 Recipes and Color Mixtures (6.RP.A.1)</p>	<p>Grade 6 Lesson 1</p> <p>Grade 6 Lesson 2 Part 1</p> <p>Grade 6 Lesson 2 Part 2</p>
Week 2	<p>Lesson 3: Equivalent Ratios (6.RP.A.1, 6.RP.A.3)</p> <p>Lesson 4: How Much for One? (6.RP.A.3, 6.RP.A.3.b)</p> <p>Lesson 5: Constant Speed and Comparing Situations (6.RP.A.3, 6.RP.A.3.b)</p> <p>Lesson 6: Tables of Equivalent Ratios (6.RP.A.3, 6.RP.A.3.a)</p> <p>Lesson 7: Solving Equivalent Ratio Problems (6.RP.A.3, 6.RP.A.3.a)</p>	<p>Grade 6 Lesson 3</p> <p>Grade 6 Lesson 4 Part 1</p> <p>Grade 6 Lesson 4 Part 2</p> <p>Grade 6 Lesson 5 Part 1</p> <p>Grade 6 Lesson 5 Part 2</p> <p>Grade 6 Lesson 6 Part 1</p> <p>Grade 6 Lesson 6 Part 2</p> <p>Grade 6 Lesson 7 Part 1</p> <p>Grade 6 Lesson 7 Part 2</p>
Week 3	Lesson 8: Equivalent Ratios Have the Same	Grade 6 Lesson 8

	<p>Unit Rates (6.RP.A.2, 6.RP.A.3, 6.RP.A.3.b) Lesson 9: What Are Percentages? (6.RP.A.3.c) Lesson 10: Percentages and Tape Diagrams (6.RP.A.3.c) Lesson 11: Solving Percentage Problems (6.RP.A.3, 6.RP.A.3.c)</p>	<p>Grade 6 Lesson 10 Part 1 Grade 6 Lesson 10 Part 2 Grade 6 Lesson 11 Part 1 Grade 6 Lesson 11 Part 2</p>
Week 4	<p>Lesson 12: Understanding Equations (6.EE.B.5) Lesson 13: Solving Equations (6.EE.B, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7) Lesson 14: Representing Situations (6.EE.A.2.a, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.RP.A.3.c) Lesson 15: Equivalent Expressions (6.EE.A.4, 6.EE.B, 6.EE.B.6, 6.NS.B.3)</p>	<p>Grade 6 Lesson 12 Part 1 Grade 6 Lesson 12 Part 2 Grade 6 Lesson 13 Part 1 Grade 6 Lesson 13 Part 2 Grade 6 Lesson 14 Part 1 Grade 6 Lesson 14 Part 2</p>

Grade 7 Reinforcement (Rising 8th)

Content		Khan Academy Resources
Week 1	<p>Lesson 1: Representing Proportional Relationships with Tables (7.RP.A.2, 7.RP.A.2.a, 7.RP.A.2.b) Lesson 2: Representing Proportional Relationships with Equations (5.NBT.B.7, 7.RP.A.2, 7.RP.A.2.c)</p>	<p>Grade 7 Lesson 1 Grade 7 Lesson 2 Part 1 Grade 7 Lesson 2 Part 2</p>
Week 2	<p>Lesson 3: Comparing Proportional and Non-Proportional Relationships (7.G.B.6, 7.RP.A.2)</p>	<p>Grade 7 Lesson 3 Grade 7 Lesson 4 Part 1 Grade 7 Lesson 4 Part 2</p>

	<p>Lesson 4: Graphing Proportional Relationships (7.RP.A.2, 7.RP.A.2.d)</p> <p>Lesson 5: Using Proportional Graphs (7.RP.A.2)</p> <p>Lesson 6: Proportional Relationship with Fractions and Decimals (7.NS.A.2.d, 7.RP.A.2)</p> <p>Lesson 7: Percent Increase and Decrease (7.RP.A.3)</p>	<p>Grade 7 Lesson 5 Part 1</p> <p>Grade 7 Lesson 5 Part 2</p> <p>Grade 7 Lesson 6</p> <p>Grade 7 Lesson 7</p>
Week 3	<p>Lesson 8: Applications of Percentages (7.RP.A.3)</p> <p>Lesson 12: Adding Rational Numbers (7.NS.A.1, 7.NS.A.1.a, 7.NS.A.1.b, 7.NS.A.1.d)</p> <p>Lesson 13: Subtracting Rational Numbers (7.NS.A.1.c, 7.NS.A.3)</p> <p>Lesson 14: Multiplying and Dividing Rational Numbers (7.NS.A.2, 7.NS.A.2.a, 7.NS.A.2.b, 7.RP.A)</p> <p>Lesson 16: Solving Equations with Rational Numbers</p> <p>Standards: 7.EE.B.4, 7.EE.B.4.a, 7.NS.A.3, MP2, MP7</p>	<p>Grade 7 Lesson 8 Part 1</p> <p>Grade 7 Lesson 8 Part 2</p> <p>Grade 7 Lesson 8 Part 3</p> <p>Grade 7 Lessons 12 & 13</p> <p>Grade 7 Lessons 12 & 13 Part 2</p> <p>Grade 7 Lesson 12 Part 3</p> <p>Grade 7 Lesson 12 Part 4</p> <p>Grade 7 lesson 13 Part 5</p> <p>Grade 7 Lessons 14 Part 1</p> <p>Grade 7 Lesson 14 Part 2</p> <p>Grade 7 Lesson 16</p> <p>Grade 7 Lesson 16b</p> <p>Grade 7 Lesson 16c</p>
Week 4	<p>Lesson 17: Tape Diagrams and Contexts</p> <p>Standards: 7.EE.B.3, MP5</p> <p>Lesson 18: Reasoning about Equations and Tape Diagrams</p> <p>Standards: 7.EE.B.3, MP7</p> <p>Lesson 19: Reasoning About Solving Equations</p> <p>Standard: 7.EE.B.4.a</p>	<p>Tape Diagrams</p> <p>Equations and Tape Diagrams</p> <p>Solving Equations</p>

Grade 8 Reinforcement (Rising Algebra 1)

Content	Khan Academy Resources
Week 1	Lesson 1: Dilations and Side Lengths of Similar Grade 8 Lesson 1

	Triangles (8.G.A, 8.G.A.4) Lesson 2: Meet Slope (8.EE.B.6, 8.G.A)	Grade 8 Lesson 2
Week 2	Lesson 3: Using Equations and Graphing Lines (8.EE.B, 8.EE.B.6, 8.G.A, 8.G.A.3) Lesson 4: Graphing and Comparing Proportional Relationships (8.EE.B, 8.EE.B.5) Lesson 5: Introduction to Linear Relationships (8.EE.B) Lesson 6: Translating to $y = mx + b$ (8.EE.B, 8.EE.B.6, 8.G.A.1) Lesson 7: Equations of All Kinds of Lines (8.EE.B, 8.EE.B.6)	Grade 8 Lesson 4 Part 1 Grade 8 Lesson 4 Part 2 Grade 8 Lesson 6 Part 1 Grade 8 Lesson 6 Part 2 Grade 8 Lesson 7 Part 1 Grade 8 Lesson 7 Part 2
Week 3	Lesson 8: Solutions to Linear Equations (8.EE.B, 8.EE.C, 8.EE.C.8.a) Lesson 9: Using Linear Relations to Solve Problems (8.EE.B.6, 8.EE.C.8.a) Lesson 10: Balanced Moves (8.EE.C, 8.EE.C.7) Lesson 11: Solving Any Linear Equation (8.EE.C, 8.EE.C.7, 8.EE.C.7.b)	Grade 8 Lesson 8 Part 1 Grade 8 Lesson 8 Part 2 Grade 8 Lesson 9 Grade 8 Lesson 10 Grade 8 Lesson 11 Part 1 Grade 8 Lesson 11 Part 2
Week 4	Lesson 12: How Many Solutions? (8.EE.C.7.a) Lesson 13: On or Off the Line? (8.EE.C.7, 8.EE.C.8) Lesson 14: Systems of Equations (8.EE.C.8, 8.EE.C.8.a, 8.EE.C.8.b) Lesson 15: Writing and Solving Systems of Equations (8.EE.C.8, 8.EE.C.8.c)	Grade 8 Lesson 12 Part 1 Grade 8 Lesson 12 Part 2 Grade 8 Lesson 13 Part 1 Grade 8 Lesson 13 Part 2 Grade 8 Lesson 14 Part 1 Grade 8 Lesson 14 Part 2 Grade 8 Lesson 15