

LAYING THE FOUNDATION / COMMON CORE STANDARDS CROSSWALK
LTF Mathematics - Level One
Modules 1-4

UPDATED 11/12/2011



LAYING THE FOUNDATION

Building Academic Excellence

LAYING THE FOUNDATION / COMMON CORE STANDARDS CROSSWALK

LTF Mathematics - Module One

| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|---------------|-------------------------------|---------------------------------------|--|--|--------------------------------------|---|
| Middle Grades | Interpreting Distance Graphs | Ratios and Proportional Relationships | 6.RP.3.b 6.RP.3.d 7.RP.2.b | | | Analysis of Functions: Piecewise Graphs ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | Expressions and Equations | 8.EE.5 8.EE.6 | | | |
| | | Functions | 8.F.5 | | | |
| Middle Grades | Interpreting Rate Graphs | Ratios and Proportional Relationships | 6.RP.3.b 6.RP.3.d 7.RP.2.b | | | Analysis of Functions: Piecewise Graphs ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | Functions | 8.F.5 | | | |
| | | Expressions and Equations | 8.EE.5 8.EE.6 | | | |
| Algebra I | Piecewise Functions | Expressions and Equations | 8.EE.5 8.EE.6 | Number and Quantity: The Real Number System | N-Q.1 | Analysis of Functions: Piecewise Graphs ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | Functions | 8.F.5 | Algebra: Creating Equations | A-CED.1 A-CED.2 | |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.11 | |
| | | | | Functions: Interpreting Functions | F-IF.1 F-IF.4 F-IF.5 F-IF.6 | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| Geometry | Analyzing Piecewise Functions | | | Algebra: Creating Equations | A-CED.1 A-CED.2 | Analysis of Functions: Piecewise Graphs ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.11 | |
| | | | | Geometry: Congruence | G-CO.2 | |
| | | | | Geometry: Circles | G-C.2 | |
| | | | | Functions: Building Functions | F-BF.3 | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| | | | | Geometry: Expressing geometric properties with equations | G-GPE.7 | |



| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|--------------|---|----------------------------------|--|--|-----------------------|---|
| Algebra II | Characteristics of Discontinuous Piecewise Function | | | Algebra: Creating Equations | A-CED.1 A-CED.2 | Analysis of Functions: Piecewise Graphs ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.11 | |
| | | | | Functions: Interpreting Functions | F-IF.4 F-IF.5 | |
| | | | | Functions: Building Functions | F-BF.3 | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| Pre-Calculus | Generic Function | | | Algebra: Creating Equations | A-CED.1 A-CED.2 | Analysis of Functions: Piecewise Graphs ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.11 | |
| | | | | Functions: Interpreting Functions | F-IF.4 F-IF.5 | |
| | | | | Functions: Building Functions | F-BF.3 | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| | | | | Functions: Trigonometric Functions | F-TF.5 | |

LAYING THE FOUNDATION / COMMON CORE STANDARDS CROSSWALK

LTF Mathematics – Module TWO

| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|---------------|-------------------------------------|---------------------------------------|---|--|-----------------------|---|
| Middle Grades | Surface Area and Volume | Ratios and Proportional Relationships | 6.RP.3.d | | | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | Number System | 6.NS.1 7.NS.3 | | | |
| | | Expressions and Equations | 6.EE.1 6.EE.2.c | | | |
| | | Geometry | 6.G.2 7.G.6 | | | |
| Middle Grades | Unit Dog | Ratios and Proportional Relationships | 6.RP.3.d | | | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | Expressions and Equations | 6.EE.1 6.EE.2.c | | | |
| | | Geometry | 6.G.2 6.G.4 7.G.6 8.G.9 | | | |
| | | Number System | 7.NS.3 | | | |
| Middle Grades | Solids of Revolution | Geometry | 6.G.1 6.G.3 6.G.4 7.G.6 8.G.9 | | | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | Number System | 6.NS.8 | | | |
| Algebra I | Solving Systems of Linear Equations | Expressions and Equations | 8.EE.8.a 8.EE.8.b | Algebra: Creating Equations | A-CED.2 A-CED.3 | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | | | Geometry: Expressing geometric properties with equations | G-GPE.7 | |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.6 A-REI.11 | |
| | | | | Functions: Interpreting Functions | F-IF.7.a | |



| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|--------------|---|----------------------------------|--|--|-----------------------|---|
| Geometry | Working with Formulas and Function Notation | | | Algebra: Creating Equations | A.CED.4 | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| Geometry | Volumes of Revolutions | | | Algebra: Reasoning with Equations and Inequalities | A-REI.12 | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | | | Functions: Interpreting Functions | F-IF.7.a F-IF.7.c | |
| | | | | Geometry: Geometric Measurement and Dimension | G-GMD.3 G-GMD.4 | |
| | | | | Geometry: Expressing Geometric Properties with Equations | G-GPE.7 | |
| Algebra II | Systems of Linear Inequalities | | | Algebra: Reasoning with Equations and Inequalities | A-REI.12 | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | | | Functions: Interpreting Functions | F-IF.7.a | |
| | | | | Geometry: Geometric Measurement and Dimension | G-GMD.3 G-GMD.4 | |
| | | | | Geometry: Modeling with Geometry | G-MG.1 | |
| | | | | Geometry: Expressing Geometric Properties with Equations | G-GPE.7 | |



| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|--------------|-----------------------------------|----------------------------------|---|---|----------------------------|---|
| Pre-Calculus | Cone Exploration and Optimization | | | Number and Quantity: Real Number System | N-RN.2 | Areas and Volume • Free Response Questions • Multiple Choice Quiz |
| | | | | Algebra: Creating Equations | A-CED.2 A-CED.4 | |
| | | | | Functions: Interpreting Functions | F-IF.4 F-IF.5 F-IF.7 | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| | | | | Geometry: Geometric Measurement and Dimension | G-GMD.3 | |
| | | | | Geometry: Similarity, Right Triangles, and Trigonometry | G-SRT.8 | |
| | | | | Function: Trigonometric Function | F-TF.1 | |
| | | | | Geometry: Circles | G-C.2 | |
| | | | Algebra: Seeing Structure in Expression | A.SSE.2 | | |

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LTF Mathematics – Module THREE

| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|---------------|--|---------------------------------------|--|-----------------------------------|-----------------------|---|
| Middle Grades | Finding Pi | Ratios and Proportional Relationships | 7.RP.2.a 7.RP.2.b 7.RP.2.c 7.RP.2.d | | | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | Number System | 6.NS.3 6.NS.6.c | | | |
| | | Geometry | 7.G.4 | | | |
| | | Statistics and Probability | 6.SP.3 | | | |
| Middle Grades | Road Trip | Ratios and Proportional Relationships | 6.RP.3.a 6.RP.3.d 7.RP.2.b | | | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | Number System | 6.NS.6.c | | | |
| Middle Grades | Average Rate of Change | Ratios and Proportional Relationships | 6.RP.3.b 6.RP.3.d 7.RP.2.b | | | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | Expressions and Equations | 8.EE.5 | | | |
| | | Number System | 7.NS.3 | | | |
| Algebra I | Calculating Average Rate of Change | | | Functions: Interpreting Functions | F-IF.6 | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Number and Quantity: Quantities | N-Q.1 | |
| Geometry | Average Rate of Change vs Instantaneous Rate of Change | | | Functions: Interpreting Functions | F-IF.4 F-IF.6 | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Number and Quantity: Quantities | N-Q.1 | |

| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|--------------|------------------------|----------------------------------|--|--|--|---|
| Algebra II | Piecewise Functions | | | Functions: Interpreting Functions | F-IF.2 F-IF.5 F-IF.6 F-IF.7.b | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Functions: Building Functions | F-BF.3 | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| | | | | Algebra: Creating Equations | A-CED.2 | |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.11 | |
| Algebra II | Average Rate of Change | | | Number and Quantity: Quantities | N-Q.1 | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Algebra: Creating Equations | A-CED.2 | |
| | | | | Functions: Interpreting Functions | F-IF.2 F-IF.6 F-IF.7.a | |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| | | | | Statistics and Probability: Interpreting Categorical and Quantitative Data | S-ID.6.a | |
| | | | | Geometry: Expressing geometric properties with equations | G-GPE.5 | |
| Pre-Calculus | Slopes of Curves | | | Functions: Interpreting Functions | F-IF.4 F-IF.5 | Rate of Change: Average and Instantaneous ▪ Free Response Questions ▪ Multiple Choice Quiz |
| | | | | Functions: Linear, Quadratic, and Exponential Models | F-LE.2 | |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.2 | |
| | | | | Algebra: Creating Equations | A-CED.2 | |

LAYING THE FOUNDATION / COMMON CORE STANDARDS CROSSWALK

LTF Mathematics – Module Four

| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|---------------|---|---|--|---|---|---|
| Middle Grades | Measures of Central Tendency and Variability | Statistics and Probability | 6.SP.2 6.SP.3 6.SP.3.d 6.SP.5.c 6.SP.5.d | | | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| Middle Grades | Stem and Leaf Plots | Statistics and Probability | 6.SP.4 6.SP.5.c 7.SP.3 7.SP.4 | | | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| Middle Grades | Bar and Histograms | Statistics and Probability | 6.SP.4 6.SP.5.c | | | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| Middle Grades | Box and Whisker Plots | Statistics and Probability Number System | 6.SP.4 6.SP.5.c 6.SP.5.d 7.SP.3 6.NS.3 | Statistics and Probability: Interpreting Categorical and Quantitative Data | S-ID.1 S-ID.2 S-ID.3 | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| Algebra I | Linear Functions, Transformations, and Graphical Displays | | | Algebra: Creating Equations Functions: Interpreting Functions Functions: Building Functions Functions: Linear, Quadratic, and Exponential Models Statistics and Probability: Interpreting Categorical and Quantitative Data Statistics and Probability: Making Inferences and Justifying Conclusions | A-CED.2 F-IF.2 F-IF.5 F-IF.7.a F-BF.3 F-LE.2 S-ID.1 S-ID.3 S-IC.1 | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |



| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|--------------|--|----------------------------------|--|---|--|---|
| Geometry | Geometry and Graphical Displays | | | Statistics and Probability: Interpreting Categorical and Quantitative Data | S-ID.1 S-ID.2 S-ID.3 | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| | | | | Statistics and Probability: Making Inferences and Justifying Conclusions | S-IC.1 S-IC.2 | |
| | | | | Geometry: Geometric Measurement and Dimension | G-GMD.3 G-GMD.4 | |
| | | | | Functions: Interpreting Functions | F-IF.7.a | |
| | | | | Algebra: Reasoning with Equations and Inequalities | A-REI.2 | |
| Algebra II | Analyzing Functional Behavior Using Graphical Displays, Part 1 | | | Functions: Interpreting Functions | F-IF.2 F-IF.4 F-IF.5 F-IF.7.a F-IF.7.b F-IF.9 | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| | | | | Statistics and Probability: Interpreting Categorical and Quantitative Data | S-ID.1 S-ID.3 | |
| | | | | Statistics and Probability: Making Inferences and Justifying Conclusions | S-IC.1 | |



| Grade/Course | Lesson Title | Critical Areas: Middle Grades | Grade Level Standard: Middle Grades | Critical Areas: High School | High School Standards | Assessment |
|--------------|--|----------------------------------|--|--|--|---|
| Algebra II | Analyzing Functional Behavior Using Graphical Displays, Part 2 | | | Functions: Interpreting Functions | F-IF.2 F-IF.4 F-IF.5 F-IF.6 F-IF.7.a F-IF.7.c F-IF.7.e F-IF.9 | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| | | | | Statistics and Probability: Interpreting Categorical and Quantitative Data | S-ID.1 S-ID.3 | |
| | | | | Statistics and Probability: Making Inferences and Justifying Conclusions | S-IC.1 | |
| Pre-Calculus | Analyzing Trigonometric functions Using Graphical Displays | | | Functions: Interpreting Functions | F-IF.2 F-IF.4 F-IF.5 F-IF.7.e F-IF.9 | Graphical Displays and Distributions • Free Response • Multiple Choice Quiz |
| | | | | Functions: Building Functions | F-BF.3 | |
| | | | | Statistics and Probability: Interpreting Categorical and Quantitative Data | S-ID.1 S-ID.3 | |

