# Math Upgrade 8 Common Core Alignment
## By Standard

| Standard | Topic | Math Upgrade 8 Level Numbers & Names |
|---|---|---|
| **The Number System** | | |
| 8.NS.A.1 | Irrational Dec Expansion | **2** Irrational Numbers |
| 8.NS.A.2 | Irrational Approximations | **2** Irrational Numbers, **3** Square Roots |
| **Expressions And Equations** | | |
| 8.EE.A.1 | Exponent Operations | **5** Exponent Rules |
| 8.EE.A.2 | Square Roots, Cube Roots | **4** Exponent Basics, **3** Square Roots, **6** Square Root Equations |
| 8.EE.A.3 | Scientific Notation | **7** Scientific Notation, **9** Scientific Comparison |
| 8.EE.A.4 | Scientific Operations | **8** Scientific Operations |
| 8.EE.B.5 | Slope and Proportion | **22** Parallel Perpendicular, 28 Slope Unit Rate, 29 Mixture Ratio, **31** Graphing Calculator |
| 8.EE.B.6 | Slope and Triangles | **20** Slope of a line |
| 8.EE.B.7a | Equation Solutions | **15** Equation Solutions |
| 8.EE.B.7b | Solve Equations | **14** Solve Equations |
| 8.EE.B.8a | Systems Graphing | **32** Systems Graphing |
| 8.EE.B.8b | Systems Substitution | **33** Systems Substitution |
| 8.EE.B.8c | Systems Problems | **34** Systems Problems |
| **Functions** | | |
| 8.F.A.1 | Functions Basics | **35** Functions Relations, **36** Functions Notation |
| 8.F.A.2 | Compare Functions | **37** Compare Functions |
| 8.F.A.3 | Linear Functions | **16** Linear Equations, **18** Points on a Line, **19** Line Graphs, **38** Non-Linear Graphs |
| 8.F.B.4 | Model Linear Function | **21** Slope Intercept, **39** Model Linear Functions |
| 8.F.B.5 | Non-Linear Graphs | **38** Non-Linear Graphs |
| **Geometry** | | |
| 8.G.A.1a | Symmetry Lines | **45** Symmetry Lab |
| 8.G.A.1b | Symmetry Angles | **45** Symmetry Lab |
| 8.G.A.1c | Symmetry Parallel Lines | **45** Symmetry Lab |
| 8.G.A.2 | Congruent Figures | **46** Congruent Figures |
| 8.G.A.3 | Coordinate Symmetry | **47** Coordinate Symmetry |
| 8.G.A.4 | Similar Figures | **48** Similar Figures |
| 8.G.A.5 | Triangle Arguments | **49** Triangle Arguments |
| 8.G.B.6 | Pythagorean Proof | **50** Pythagorean Proof |
| 8.G.B.7 | Pythagorean Problems | **51** Pythagorean Problems |
| 8.G.B.8 | Pythagorean Distance | **52** Pythagorean Distance |
| 8.G.C.9 | Volume Solid Figures | **53** Volume Solid Figures |
| **Statistics And Probability** | | |
| 8.SP.A.1 | Scatterplots | **54** Scatterplots, **55** Scatterplots Create |
| 8.SP.A.2 | Linear Fit | **56** Linear Fit |
| 8.SP.A.3 | Linear Model Problems | **57** Linear Model Problems |
| 8.SP.A.4 | Two-Way Tables | **58** Two-Way Tables |

# Math Upgrade 8 Common Core Alignment
## By Course Lesson
Learning Upgrade Version: January 2014 DRAFT NOT FINAL

| # | Lesson | Standard | | Lesson | Standard |
|---|---|---|---|---|---|
| 1 | Rational Numbers | review | 31 | Graphing Calculator | 8.EE.B.5 |
| 2 | Irrational Numbers | 8.NS.A.1, 2 | 32 | Systems Graphing | 8.EE.C.8a |
| 3 | Square Roots | 8.NS.A.2, 8.EE.A.2 | 33 | Systems Substitution | 8.EE.C.8b |
| 4 | Exponent Basics | review | 34 | Systems Problems | 8.EE.C.8c |
| 5 | Exponent Rules | 8.EE.A.1 | 35 | Functions Relations | 8.F.A.1 |
| 6 | Square Root Equations | 8.EE.A.2 | 36 | Functions Notation | 8.F.A.1 |
| 7 | Scientific Notation | 8.EE.A.3 | 37 | Compare Functions | 8.F.A.2 |
| 8 | Scientific Operations | 8.EE.A.4 | 38 | Nonlinear Graphs | 8.F.A.3, 8.F.B.5 |
| 9 | Scientific Comparison | 8.EE.A.3 | 39 | Model Linear Functions | 8.F.B.4 |
| 10 | Coordinate Graphs | review | 40 | Angles Lines | review |
| 11 | Relations Table Graphs | review | 41 | Triangles | review |
| 12 | Translate Words to Algebra | review | 42 | Polygons | review |
| 13 | Solve 1-Step Equations | review | 43 | Scale Drawings | review |
| 14 | Solve Equations | 8.EE.B.7b | 44 | Symmetry | review |
| 15 | Equation Solutions | 8.EE.B.7a | 45 | Symmetry Lab | 8.G.A.1a,1b,1c |
| 16 | Linear Equations | 8.F.A.3 | 46 | Congruent Figures | 8.G.A.2 |
| 17 | Graph by Intercept | review | 47 | Coordinate Symmetry | 8.G.A.3 |
| 18 | Points on a Line | 8.F.A.3 | 48 | Similar Figures | 8.G.A.4 |
| 19 | Line Graphs | 8.F.A.3 | 49 | Triangle Arguments | 8.G.A.5 |
| 20 | Slope of a Line | 8.EE.B.6, 8.F.B.4 | 50 | Pythagorean Proof | 8.G.B.6 |
| 21 | Slope Intercept | 8.F.B.4 | 51 | Pythagorean Problems | 8.G.B.7 |
| 22 | Parallel Perpendicular | 8.EE.B.5 | 52 | Pythagorean Distance | 8.G.B.8 |
| 23 | Point Slope | 8.F.B.4 | 53 | Volume Solid Figures | 8.G.C.9 |
| 24 | Ratio Proportion | review | 54 | Scatterplots | review |
| 25 | Unit Rates 7 | review | 55 | Scatterplots Create | 8.SP.A.1 |
| 26 | Constant of Proportionality | review | 56 | Linear Fit | 8.SP.A.2 |
| 27 | Proportion graphs | review | 57 | Linear Model Problems | 8.SP.A.3 |
| 28 | Slope Unit Rate | 8.EE.B.5 | 58 | Two-Way Tables | 8.SP.A.4 |
| 29 | Mixture Ratio Problems | 8.EE.B.5 | 59 | Performance Problem 8 | |
| 30 | Rate Problems | 8.EE.B.5 | 60 | Final Challenge | |

*enhancements to level or change extra / state level to Common Core level planned