IXL Skill Plan for the NJGPA

Mathematics

Use IXL's interactive skill plan to get up-to-date skill alignments, assign skills to your students, and track progress.

www.ixl.com/math/skill-plans/njgpa-math

Algebra

Algebra

Sub-Claim A: Major Content

Standard	IXL skills
Expressions	**Polynomial operations** 1. Checkpoint: Add, subtract, and multiply polynomials XGP **Factoring** 2. Factor quadratics with other leading coefficients 7ED 3. Factor quadratics: special cases 56E
Interpreting Functions	1. Identify functions: vertical line test HLX 2. Domain and range of relations 2CG 3. Domain and range of quadratic functions: equations 4J7 4. Interpret functions using everyday language U98 5. Interpret the graph of a function: word problems STU 6. Evaluate a function R96
Rate of Change	1. Checkpoint: Average rate of change T79
Solving Algebraically	**Linear equations and inequalities** 1. Solve linear equations: mixed review DN6 2. Solve advanced linear inequalities 9K8 **Quadratic equations** 3. Solve a quadratic equation by factoring CSS 4. Solve a quadratic equation using the quadratic formula XCF **Multi-variable equations** 5. Rearrange multi-variable equations WSJ

Solving Graphically	**Graph solution sets** 1. Relate the graph of an equation to its solutions L8U 2. Solve a system of equations by graphing TSS 3. Solve systems of linear inequalities by graphing SGH **Approximate solutions** 4. Approximate solutions using a table FK2

Sub-Claim B: Additional & Supporting Content

Standard	IXL skills
Number Systems	1. Classify rational and irrational numbers 3S8
Equivalent Expressions and Functions	1. Write a quadratic function in vertex form W2Q
Interpreting Graphs of Functions	1. Graph linear functions VVB 2. Characteristics of quadratic functions: graphs HW8 3. Match quadratic functions and graphs AU8 4. Match cubic functions and graphs 48R
Function Transformations	1. Transformations of linear functions C8G 2. Transformations of quadratic functions 6YS
Multiple Representations of Functions	1. Solve a system of equations using any method: word problems GDQ 2. Compare linear functions: tables, graphs, and equations GD7 3. Write linear and exponential functions from tables JGJ 4. Write linear and exponential functions: word problems T84
Summarizing, Representing, and Interpreting Data	1. Checkpoint: Two-way frequency tables 5GL 2. Checkpoint: Linear modeling U7N

Sub-Claim C: Expressing Mathematical Reasoning

Standard	IXL skills
Reasoning	1. Properties of operations on rational and irrational numbers C7S 2. Checkpoint: Solve linear equations and inequalities VYL 3. Describe linear and exponential growth and decay S7T 4. Checkpoint: Quadratic equations NXG 5. Checkpoint: Solve equations using graphs and tables DV9 6. Checkpoint: Systems of equations and inequalities LQW 7. Checkpoint: Function transformations QKX

Sub-Claim D: Modeling and Application

Standard	IXL skills
Modeling	1. Checkpoint: Units and quantities CBX 2. Checkpoint: Problem solving with equations and inequalities QZQ 3. Checkpoint: Represent constraints 2VV

Geometry

Geometry

Sub-Claim A: Major Content

Standard	IXL skills
Congruence Transformations	**Congruence transformations** 1. Transformations that carry a polygon onto itself RJW 2. Congruence transformations: mixed review XQ7 **Geometric theorems** 3. Proofs involving angles HV9 4. Proofs involving parallel lines I CUV 5. Proofs involving parallel lines II 5U8 6. Proofs involving triangles I G78 7. Proofs involving triangles II DUQ
Similarity	**Dilations** 1. Checkpoint: Dilations 8C6 **Similarity transformations** 2. Similar triangles and similarity transformations G2Z **Similar triangles** 3. Similarity rules for triangles XJQ 4. Triangle Proportionality Theorem 6WA 5. Midsegments of triangles 8GT
Similarity in Trigonometry	1. Trigonometric ratios in similar right triangles 7X7 2. Sine and cosine of complementary angles KMH 3. Solve a right triangle GPR
Modeling and Applying	1. Checkpoint: Partition a line segment U7H 2. Checkpoint: Area and perimeter in the coordinate plane 9VT 3. Pythagorean theorem F55

Visit IXL's interactive skill plan at www.ixl.com/math/skill-plans/njgpa-math

Sub-Claim B: Additional & Supporting Content

Standard	IXL skills
Transformations	1. Checkpoint: Definitions of geometric objects 2JF 2. Checkpoint: Transformations of geometric figures D5L
Geometric Constructions	1. Construct an angle bisector FHL 2. Construct the midpoint or perpendicular bisector of a segment HDT
Applying Geometric Properties and Theorems	1. Checkpoint: Angles and lines in circles 8AM 2. Checkpoint: Arc length and area of sectors 57A 3. Find properties of circles from equations in general form EAJ
Geometric Formulas	1. Volume of prisms and pyramids 8S2 2. Volume of cylinders, cones, and spheres VW8 3. Checkpoint: Cross sections and solids of revolution PYM

Sub-Claim C: Expressing Mathematical Reasoning

Standard	IXL skills
Reasoning	1. Checkpoint: Coordinate proofs 26X 2. Checkpoint: Parallel and perpendicular lines JR9 3. Checkpoint: Rigid motion and congruence H9L 4. Checkpoint: Geometric constructions PQG 5. Checkpoint: Similarity transformations 54T 6. Checkpoint: Triangle similarity and congruence 5MD 7. Checkpoint: Triangle theorems PN5 8. Checkpoint: Line and angle theorems SXW

Sub-Claim D: Modeling and Application

Standard	IXL skills
Modeling	1. Checkpoint: Right triangle trigonometry 45J 2. Checkpoint: Volume WY6 3. Checkpoint: Geometric modeling and design T92 4. Checkpoint: Density BDY