

## **Three-Week Geometry Course: Graphing**

### ***Session 1: Overview and The Coordinate Plane***

- Mapping of the Concept of Graphing: an Overview
- History and Parts
- Activities to Learn the Coordinate Plane

### ***Session 2: Activities on the Coordinate Plane***

- Midpoint
- Distance
- Slope

### ***Sessions 3 & 4: Linear Equations***

- The Baby-Sitting Problem
  - Slope as Rate
- Slope-Intercept Form
- Jersey's Pizza Project
- Systems of Equations
- Vertical and Horizontal Lines
- Parallel and Perpendicular Lines
- Rewriting Linear Equations
- Point-Slope Form
- Line Given Two Points
- Mixed Linear Equations

### ***Session 5: Connecting the Coordinate Plane with Algebra***

- x-y Charts
- Intercepts
- Symmetry
- Parent Graphs

### ***Session 6: Transformations of Graphs***

- Vertical & Horizontal Shifts
- Scaling Factor
- Combining Transformations
- Conclusion: A Summary