



Youth & Education Programs

## Map FUNctions (GA Lesson Plan #3)

**Suggested Grade Levels:** Grades 5-10

### **Standards:**

[5.G.A.1 Graph points on the coordinate plane to solve real-world and mathematical problems.](#)

[8.F Define, evaluate, and compare functions.](#)

### **Scenario Overview / Introduction:**

Students will plot their route through the Park. By determining the coordinates of each location, students can create a scatterplot or linear equations.

### **Essential Question:**

How can we accurately describe the location of places or objects?

### **Learning Objectives:**

Students will accurately plot coordinates points based on location. By connecting the points, students create lines, for which linear equations can be written.

### **Vocabulary**

- **Coordinate plane:** a two-dimensional plane formed by the intersection of a vertical line called y-axis and a horizontal line called x-axis.
- **Ordered pair:** a pair of numbers used to locate a point on a coordinate plane.
- **Domain:** the set of all input values of a function
- **Range:** the set of all output values of a function
- **Scatterplot:** a graph of plotted points that show the relationship between two sets of data.
- **Linear equation:** an equation that makes a straight line when it is graphed, often written in the form  $y = mx + b$
- **Continuous:** data that can take any value over a continuous range
- **Discrete:** data that takes particular values

### **Pre-Visit Learning Activities:**

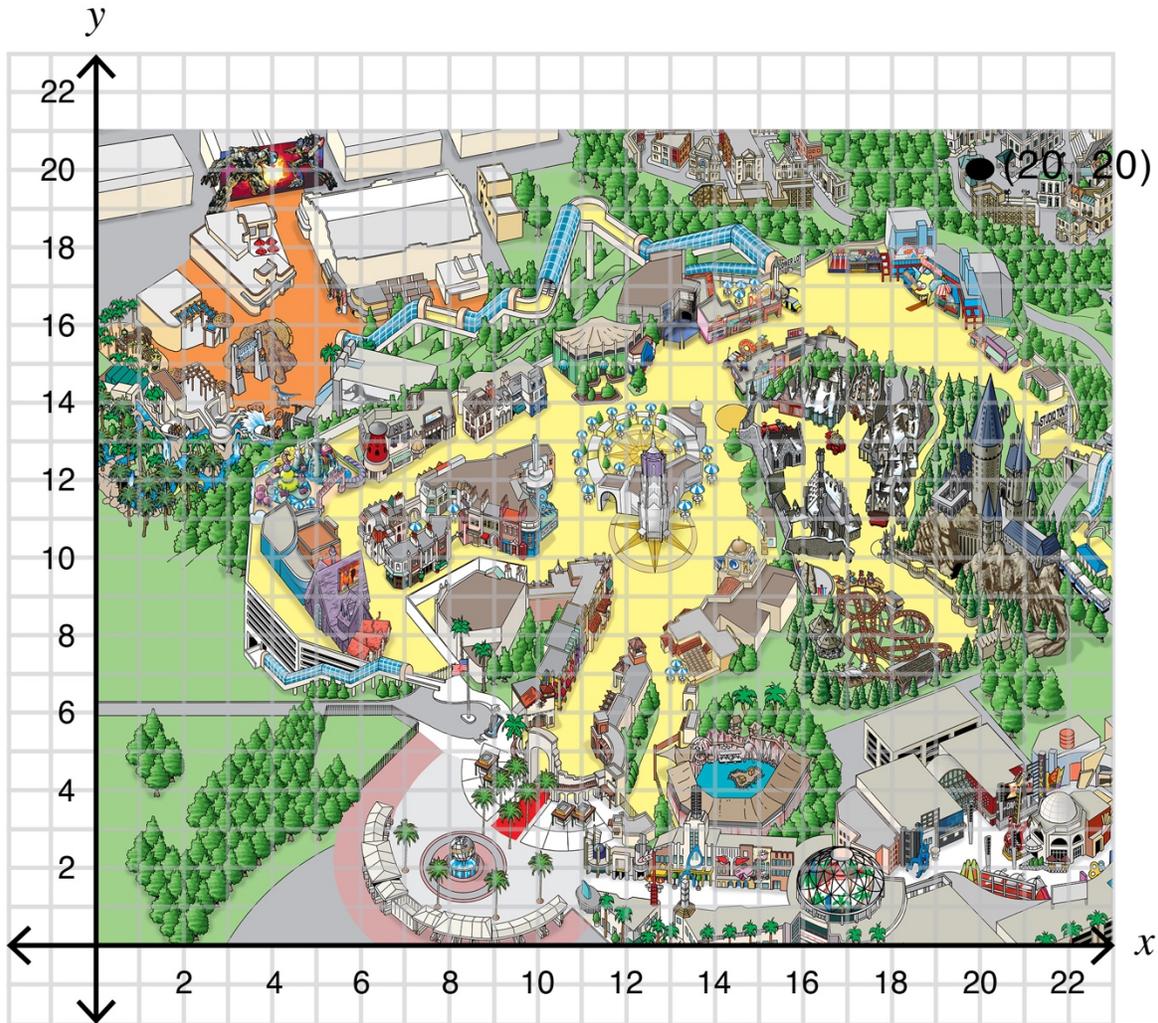
1. To become more familiar with the layout of the Park, students are given the provided map with a 4 quadrant coordinate grid overlay. In partners or groups, students identify locations by calling out their coordinates and the group members guessing where they are.
2. Discussion regarding what is more practical, useful, accurate, etc. as to using a one quadrant coordinate plane versus a four quadrant coordinate plane. (Both are provided.)



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**Post-Visit Learning Activities:**

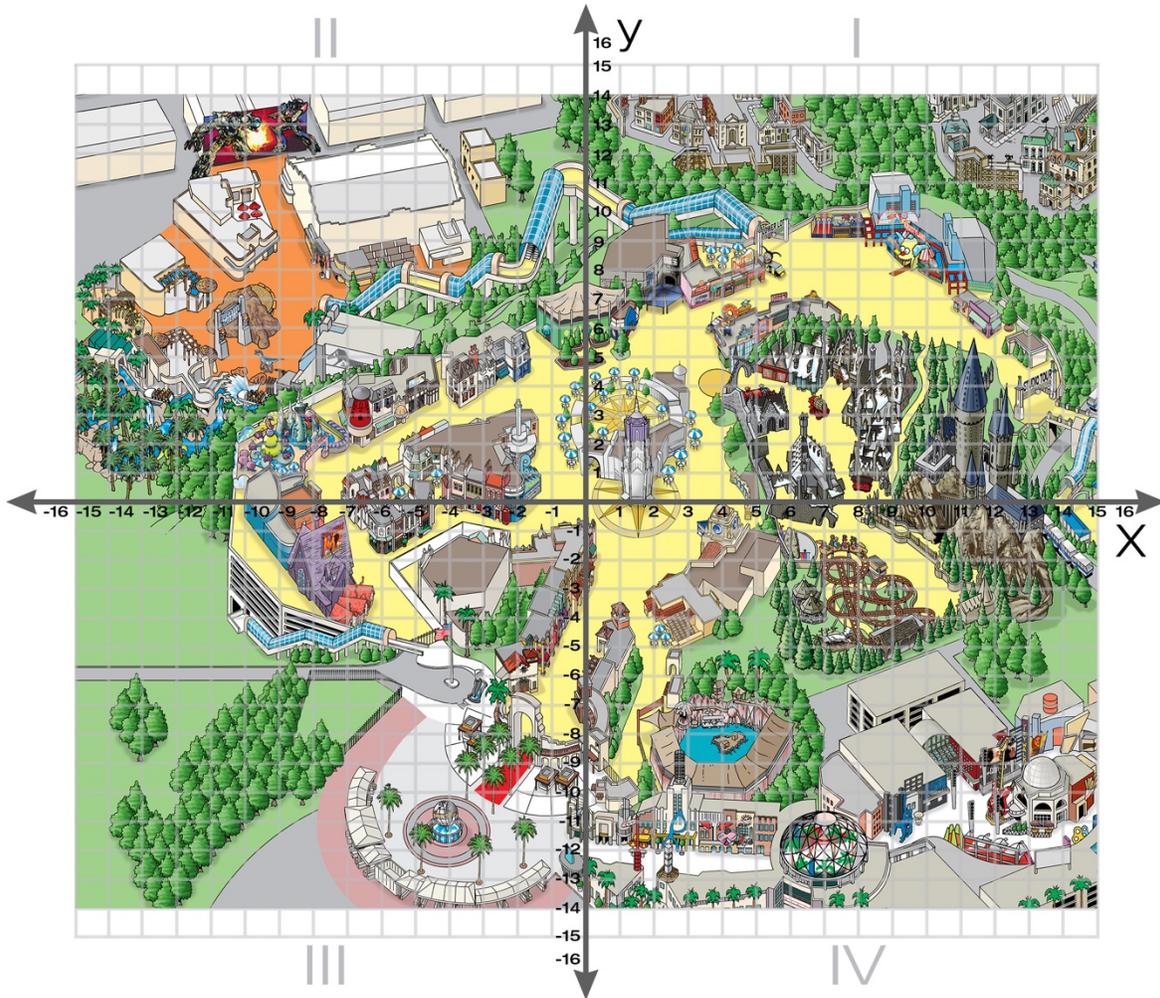
1. Using the data collected, create linear equations from each location.
2. View the maps as scatterplots. Compare with each group to see the maximum/minimum rides a group was able to go on. Devise a particular order to do the attractions and shows that will maximize the time spent in the Park.



<https://ya-webdesign.com/image/graph-transparent-1st-quadrant/1405206.html>



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