Create Your own Destination!

**BEFORE YOU BEGIN:**

**Carefully read the directions before beginning your project so that you understand the assignment. In this project you will show me what you’ve learned about parallel and perpendicular lines and their properties.**

Before starting the project, make a rough draft of your map on graph paper. Use the rough draft to sketch out where things will go on the larger map. **This will be part of your final grade.** Then use your rough draft to help you create your map on a piece of poster board. Think about the areas that need to be reserved for specific things in your destination. Keep in mind your destination should be either a city, zoo, or amusement park. All lines, roads, and buildings must be drawn with a ruler. Throughout the assignment you are given choices of what to place in specific locations (i.e. information center/city hall/courthouse) you must choose which of these makes sense with your destination and indicate your choice on your map. (Note: some directions will require the choice of more than one thing)

**DIRECTIONS:**

Your map must include the following:

1. Give your destination a name and a motto/saying. Place the name of your destination and it’s motto/saying in the **top right corner** of your map.
2. The following **roads** must be included (All lines must be made with a ruler and all roads are the same width). *Hint: Your roads/paths will look neater if you erase any solid lies where two or more roads/paths meet*. Make it look realistic. There are no lines where roads/paths intersect.
3. Draw **six parallel roads/paths** (all parallel to each other) and name each road/path.
4. Draw **two perpendicular roads/paths** (to the 6 parallel roads/paths) and name these roads/paths.
5. Draw **two transversal roads/paths** on your map. They may intersect each other, or any of the other roads/paths. These roads/paths intersect, but are **NOT** perpendicular. Name these roads/paths.
6. In your destination, you will also create a **main square/town** **center**. This could be a key exhibit, roller coaster, gift shop area/concessions area or park. But it must meet the following criteria:
7. The **main square/town center** must fit within a rectangle with an area of 36 square inches (A=b\*h)
8. Within this rectangle draw a **concave polygon** side attraction whether this be the pond in the exhibit, entrance to the roller coaster, gift shop, or merry-go-round with a one inch diameter. You must state what this side attraction is. As well as the interior angle sum of the polygon.
9. Draw a **convex polygon** whose interior angle sum is at least 540 but less than 2,160, this area should be another attraction within your main square. This could something like the seating area,
10. Draw a **pond/fountain** with a diameter of 1 inch.
11. Finally, draw a **right scalene triangle** for the picnic area (include measurements).
12. The following **buildings/exhibits** must be placed as directed. *Each must have a mathematical name (ex. Angular Apartments, Aunt Patty’s Pi Store, Mathematical Market, Axis the Alligator Cage, Function Coaster)*.
13. Main entrance must be at an **obtuse angle corner**.
14. Library/Store must be at an **acute angle corner**.
15. Restaurant/Attraction must be at a **right angle corner**.
16. Gas Stations/Restrooms must be on **vertical angles**.
17. Information Centers/City Hall/Courthouse must be on **supplementary angles**.
18. Grocery Store/Ice Cream Shop/Souvenir Shop must be on **adjacent angles**.
19. Traffic Lights/Road signs/Exhibit signs at 2 intersections (draw a star to indicate these)
20. At least **10 houses/exhibits/rides** **in the shapes** of squares, rectangles, triangles, trapezoids, parallelograms, and rhombuses (at least one of each shape)
21. The **police station/security and movie theater/showcase** must be **alternate interior angles.**
22. The **dog park/playground and waterpark/children’s** area must be alternate exterior angles.
23. **Name and label all roads/paths and buildings clearly.** You may use a black marker to label all your streets and buildings.
24. Use crayons or colored pencils to **color your destination**. Be Creative! ☺

**Part Two:**

You are also to write out three different sets of direction from one place to another. These must be typed or neatly written. Each set of directions must have (at least) one of these terms: parallel, intersecting or perpendicular. These directions should be able to get your volunteer testers from one place to another on your map without getting lost.