DESIGNING A FLOOR PLAN

Geometry Assignment
Assigned: _____
Due: _____
Worth: One Test Grade

Pretend you are an architect. You have to design the floor plan to a house. The guidelines are as follows:

1. The total area of the floor plan is 2000 square feet.
2. You are required to design a house that is one story tall. If you want, you may design a two-story house, but the 2000 square feet is still a requirement.
3. You must have a kitchen, three bedrooms, a living room, a dining room and two bathrooms.
4. You need to show where the halls are and where the doors to each room are. Include the front door in the plan.
5. Since we are working with areas of different shapes, you must include a room in the shape of a square, a rectangle, a non-equiangular parallelogram, a trapezoid and a triangle.
6. When you hand in the floor plan, you must include a list of all the rooms and their dimensions. Show that the total area adds up to 2000 square feet.

This project will be graded as follows:

Accuracy of measurements	**50 pts**
All requirements met	**30 pts**
Creativity	**10 pts**
Neatness	**5 pts**
Answer to the questions/Self-evaluation	**5 pts**

[Created by Nicole Leone, Newtown High School]

Floor Plan - Self Evaluation Sheet
Here are some questions about your floor plan.

Did you meet all the requirements?

Room Shapes	**Circle One**
Square	**Yes or No**
Rectangle	**Yes or No**
Triangle	**Yes or No**
Trapezoid	**Yes or No**
A Non-Rectangular Parallelogram	**Yes or No**

Rooms

Kitchen	**Yes or No**
Dining Room	**Yes or No**
3 Bedrooms	**Yes or No**
2 Bathrooms	**Yes or No**
Living Room	**Yes or No**

Size of House

2000 Square Feet	**Yes or No**

Questions.

1. **What was hard about designing this house?**
2. **What was easy about designing this house?**
3. **Do you consider this to be a big house?**
4. **What is your biggest room? Is that room usually the biggest room in a house?**
5. **If you didn't meet one of the requirements, why didn't you?**
6. **Did you enjoy this project?**
7. **Your floor plan will be graded according to the following:**

Accuracy in Measurements	**45 pts**
Meeting the Requirements	**30 pts**
Creativity	**10 pts**
Neatness	**10 pts**
The answers to these questions	**5 pts**

Knowing this, what do you think your grade should be?

Room Name	Shape	Dimensions	Area

Requirements:

- **A front door**
- **A kitchen**
- **A dining room**
- **A living room**
- **3 bedrooms**
- **2 bathrooms**
- **2000 square feet total**

A room in the shape of:

- **a rectangle**
- **a square**
- **a trapezoid**
- **a triangle**
- **a non-rectangular parallelogram**

Options:

- **A garage**
- **A family room**
- **A swimming pool**
- **Closets**
- **A room in the shape of a rhombus, that's not a square**
- **Two floors**