

## A Floor Plan Project

In this project you will be creating a 2-dimensional drawing of your dream home. This dream home will include everything and anything you desire. It will also include some of the geometrical shapes we have been studied. You will be the architect and the construction manager of this project.

### PART I: FLOOR PLAN DRAWING

The first part of your project will be to create a plan drawing of one floor of your home. It must include distances and measurements, and must also include at least one of each of these types of shapes:

- Square
- Rectangle
- Triangle
- Circle (at least a portion of a circle, for example a semi circle)

Your drawing must have these elements:

- Each of your rooms must be clearly labeled (what type of room is it and what type of shape it is) and neatly drawn.

Rooms Required (at least the following, but it can have more)

- 2 bedrooms
- 2 bathrooms
- 1 kitchen
- 1 garage
- 1 living room

You must use color and make this dream home appealing.

You will use a scale for your drawing so that your drawing is realistic and life-like.

For example, 1 inch = 5 feet.

Your home should have realistic measurements, and should be something someone would actually live in. Refer to floor plans on the Internet for assistance.

### PART 2: AREA CALCULATIONS

The second part of your project is to outfit your dream home. Your dream home must have some type of flooring. You must choose at least 2 different types of flooring to use in your home. In order to determine how much flooring you will need, you must calculate the area of each room and decide which type of flooring you will use for each room.

a) You will need to find the area of each room and clearly show all of your work!

- Area Formulas:
- Area of a Square = (side)(side)
- Area of a Rectangle = (base)(height)
- Area of a Triangle =  $(\frac{1}{2})(\text{base})(\text{height})$
- Area of a Circle =  $(\text{Pi})(\text{radius})(\text{radius})$  (round up to nearest square foot)

b) Using these areas and the prices for flooring listed below, choose your type of flooring and calculate how much it will cost. You must show all of your work!

- Carpet \$4 per square foot
- Linoleum \$2 per square foot
- Ceramic Tile \$7 per square foot
- Hardwood Flooring \$10 per square foot