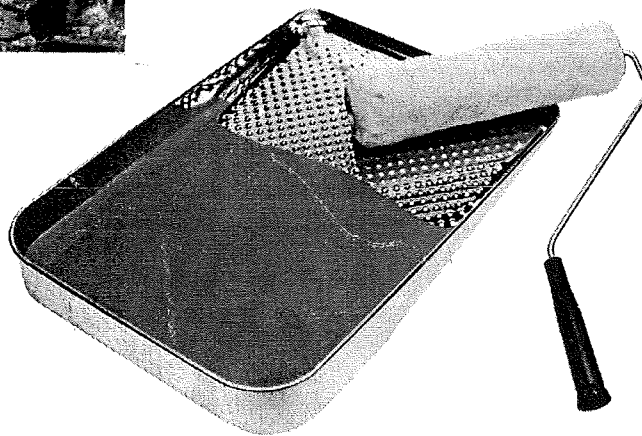
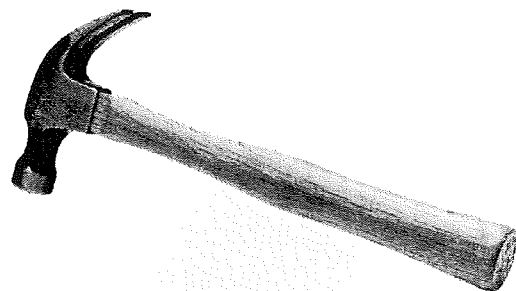


# The Dream House Project



## The Dream House Project

In the next several weeks, you will do the following in math class:

1. Apply multiplication, area, and perimeter solving skills to real-life problems
2. Create blueprints for a home you want to build
3. Determine the cost of building your dream home within a budget
4. Build a model of the dream home

Expectations:

- \* You will work hard and be focused on the tasks at hand
- \* Attempt to problem solve with strategies you have developed (drawing an array/picture, use addition sentences, skip counting)
- \* Only turn in your best work

Do your best, think creatively, and above all else, have fun.

Sincerely,

The General Contractors

Name:

## The Dream House Project

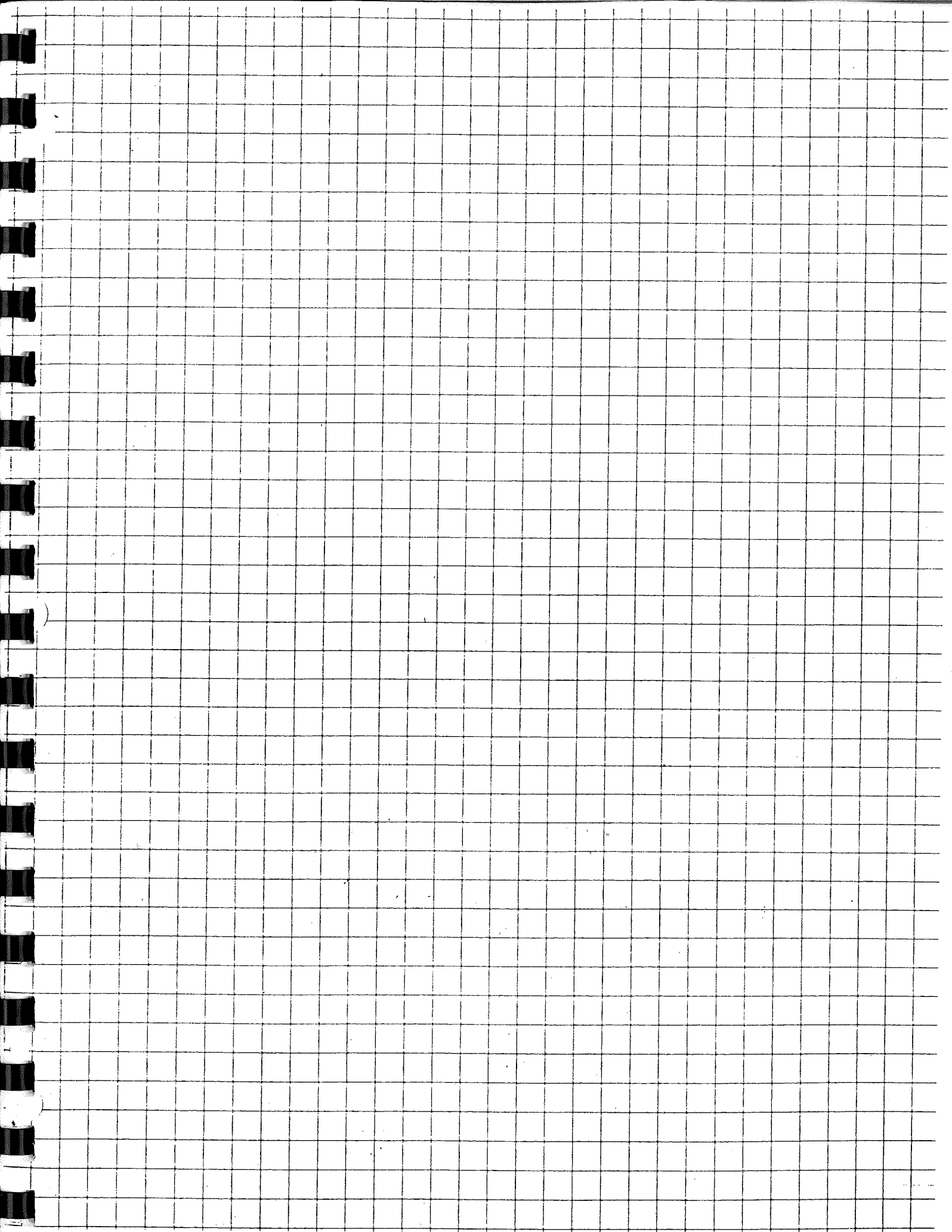
You have decided to build a home. You have a limited amount of space. Based upon the following restrictions, you will draw a blueprint for your dream house.

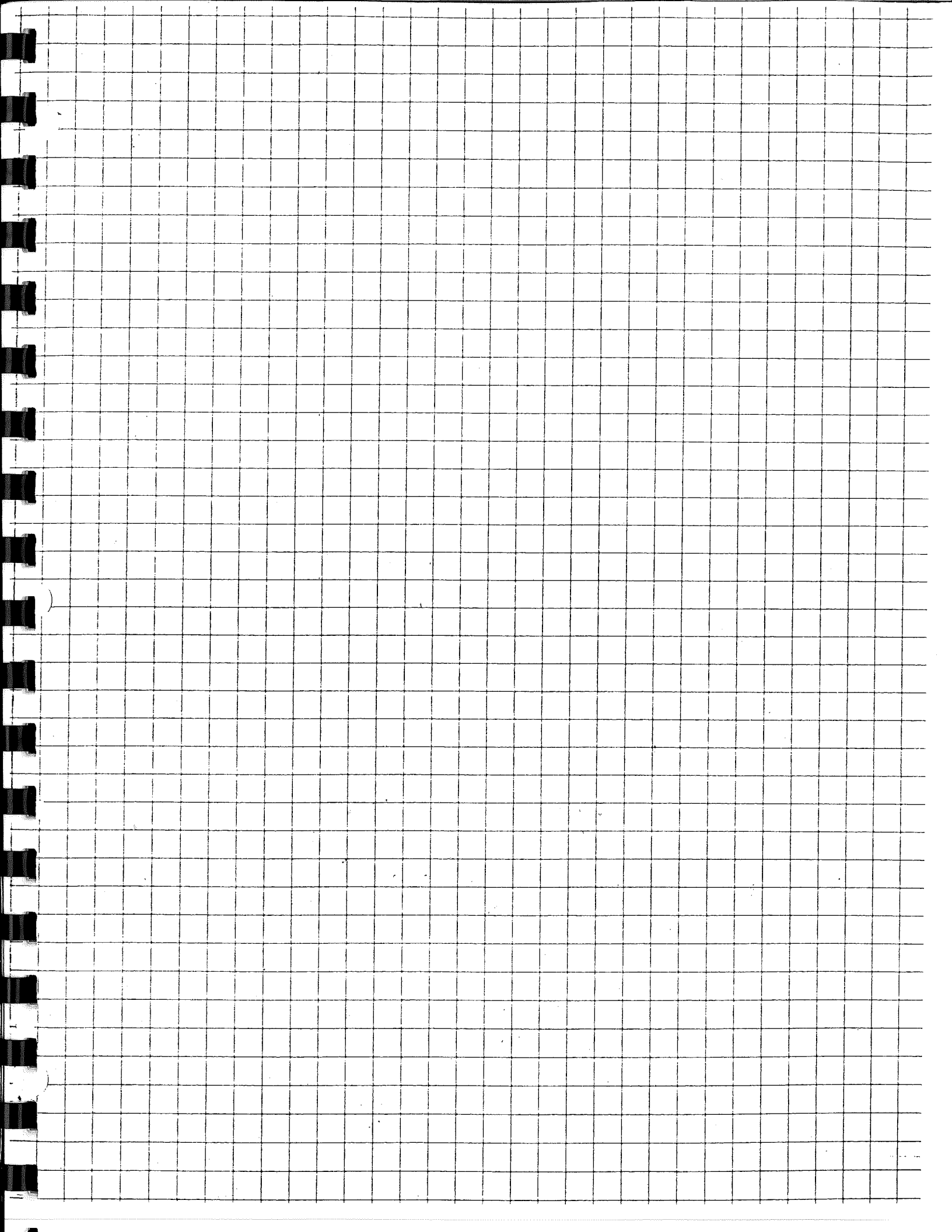
The restrictions are:

1. The total area of the home must be between 1,000 and 2,000 square feet.
2. You must have 1 bedroom, 1 bath, 1 kitchen, 1 family room. You can add more bedrooms, bathrooms, recreation rooms, office space, laundry rooms, dining rooms, etc. as space permits.
3. All bedrooms must be at least 10 feet long by 8 feet wide (80 square feet of area).
4. All bathrooms must be at least 5 feet long by 4 feet wide.
5. You must have at least one doorway.

6. You will be adding windows in another section.  
They do NOT need to be on the plan. The same is true of any other special features.
7. Your house must fit on one level -- no two stories!

You will sketch your ideas on a rough draft page. Then, you will make a final, larger copy on "architect paper." Do your best work!





Room Name	Total Area	Perimeter
Kitchen		
Family Room		
Bedroom 1		
Bathroom 1		

Total Area of the House: \_\_\_\_\_

Now, determine the cost for building the house:

Number of Workers x Cost of Worker x Hours = Cost to Build House

Solve, and show your work below!



## Time to Build!

It takes more than just money to build a house. You need to hire people to help put together your house. Depending on the size of your home, it may take more or less time to construct it. And time means MONEY. Use the following table to help decide how many people to hire, and how much you need to pay them!

Total Area of the House	Number of Workers Needed	Cost of Each Worker per One Hour	Hours Needed to Complete the Job
1,000 -- 1,300 square ft.	3	\$25	40
1,301 -- 1,600 square ft.	4	\$30	80
1,601 -- 1,900 square ft.	5	\$35	120
1,901 -- 2,000 square ft.	6	\$40	160

## Budget Worksheet 1

You can't spend money without checking your budget! Remember, you only have \$100,000 to spend on your entire house. Now that you've built the house, find out how much money you have left to spend!

Starting Budget:
Cost to Build House:
Money I Have Left to Spend:

## Floors

It's time to select what type of floors you want in your home. Remember, you are on a budget. The type of floor covering you can select is: wood, carpet, or linoleum. Choose which one you want, how much you will need, where it will be placed, and finally, the cost!

Type	Cost of Flooring (per square foot)
Wood Floors	\$10
Carpet	\$5
Linoleum	\$4

[illegible]

## Budget Worksheet 2

You can't spend money without checking your budget! Remember, you only have \$100,000 to spend on your entire house. Now that you've selected the flooring, find out how much money you have left to spend!

Money I Have Left to Spend From Budget Sheet 1:
Total Spent on Flooring:
Money I Have Left to Spend:

## Paint

It's time to paint the inside of your house! You will be using a special blend of Blackwell-Hamman Paints to complete the job. You need to figure out the cost of paint for 3 rooms of your choice.

Here are some important facts:

- All walls are 8 feet tall.
- Every gallon bucket costs \$9.
- One gallon bucket will paint 25 square feet.

Use the following pages to determine how much paint you will need to buy, and the cost to paint the 3 rooms.

\*Don't worry about windows or doors. You will not need to consider them in the calculations.

Room # | Name: \_\_\_\_\_

Height: \_\_\_\_\_

Area of Wall #1:

Length: \_\_\_\_\_

Height: \_\_\_\_\_

Area of Wall #2: \_\_\_\_\_

Length: \_\_\_\_\_

Height:\_\_\_\_\_

Area of Wall #3:\_\_\_\_\_

Length:\_\_\_\_\_

Height:\_\_\_\_\_

Area of Wall #4: \_\_\_\_\_

Length:\_\_\_\_\_

Room #2 Name: \_\_\_\_\_

Height: \_\_\_\_\_

Area of Wall #1:

Length: \_\_\_\_\_

Height: \_\_\_\_\_

Area of Wall #2: \_\_\_\_\_

Length: \_\_\_\_\_



Height:\_\_\_\_\_

Area of Wall #3:\_\_\_\_\_

Length:\_\_\_\_\_

Height:\_\_\_\_\_

Area of Wall #4: \_\_\_\_\_

Length:\_\_\_\_\_

Room #3 Name: \_\_\_\_\_

Height: \_\_\_\_\_

Area of Wall #1: \_\_\_\_\_

Length: \_\_\_\_\_

Height: \_\_\_\_\_

Area of Wall #2: \_\_\_\_\_

Length: \_\_\_\_\_

Height:\_\_\_\_\_

Area of Wall #3:\_\_\_\_\_

Length:\_\_\_\_\_

Height:\_\_\_\_\_

Area of Wall #4: \_\_\_\_\_

Length:\_\_\_\_\_

Add together the area of the 4 walls for the rooms.

Room:	Area of Wall
Wall 1	
Wall 2	
Wall 3	
Wall 4	
<b>Total Wall Area for Room:</b>	

Room:	Area of Wall
Wall 1	
Wall 2	
Wall 3	
Wall 4	
<b>Total Wall Area for Room:</b>	

Room:	Area of Wall
Wall 1	
Wall 2	
Wall 3	
Wall 4	
<b>Total Wall Area for Room:</b>	

Now, add together your three totals of room area.

Room:	Total Wall Area for Room:
<b>Total Area to Paint:</b>	

## How Much Paint Do I Need to Buy?

Some key facts to remember:

- Every gallon bucket costs \$9.
- One gallon bucket will paint 25 square feet.

(You can use a calculator for the next part.)

Total Area to Paint \_\_\_\_\_  $\div$  25 = \_\_\_\_\_  
(Number of Gallon Buckets)

Your answer is the number of gallon buckets needed to paint these rooms. Round the number up. For example, if the answer is 6.342, round up to 7 gallon buckets.

Now, time to determine the cost of that paint!

Number of Gallon Buckets \_\_\_\_\_  $\times$  \$9 = \_\_\_\_\_  
(Total Cost of Paint)

### Budget Worksheet 3

You can't spend money without checking your budget! Remember, you only have \$100,000 to spend on your entire house. Now that you've painted the rooms, find out how much money you have left to spend!

Money I Have Left to Spend from Budget Sheet 2:
Total Cost of Paint:
Money I Have Left to Spend:

## Fixtures!

A house is never complete without fixtures. Use the table below to help select what features you want in your home. Circle the fixture you want, along with the cost, and write in how many you need. Remember, stay within your budget!

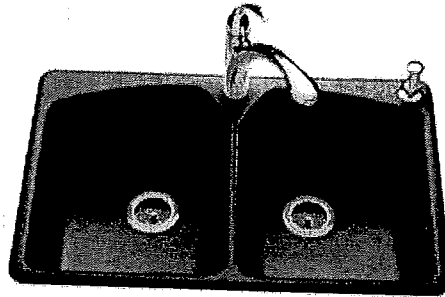
### Cost of Fixtures Worksheet

Fixture Name	Price of Fixture
GE 30 Freestanding Clean Design Stove	\$500
Americana 30 Freestanding Stove	\$300
Dishwasher	\$220
Kohler Kitchen Sink	\$178
Tanager Kitchen Sink	\$99
Bathtub&Shower Combo	\$300
Toilet	\$55
Shower (no tub)	\$584
Bathroom Sink	\$100
Room Doors	\$100
Windows	\$40
Clothes Washer	\$320
Clothes Dryer	\$260
Amana Fridge	\$720
Maytag French Fridge	\$990
Legacy Front Door	\$450
Maple Front Door	\$230
Clancy Door	\$175



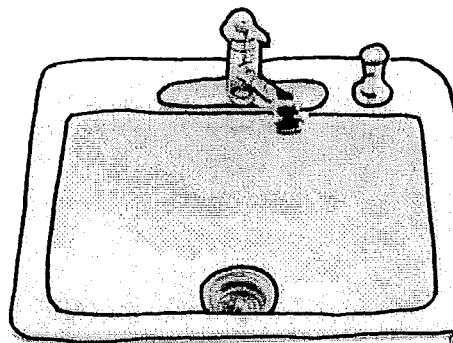
### **Kohler Kitchen Sink**

- Side by side faucet and tubs
- Comes only in black and navy blue
- Porcelain cover



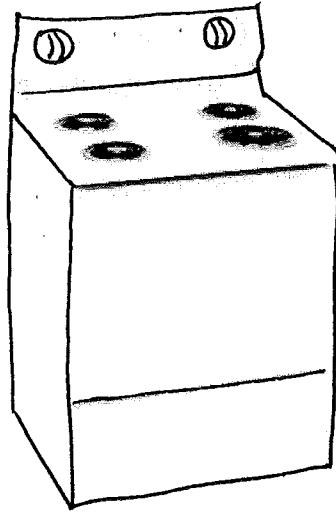
### **Tanager Kitchen Sink**

- One tub with single faucet
- Porcelain cover
- Comes in white



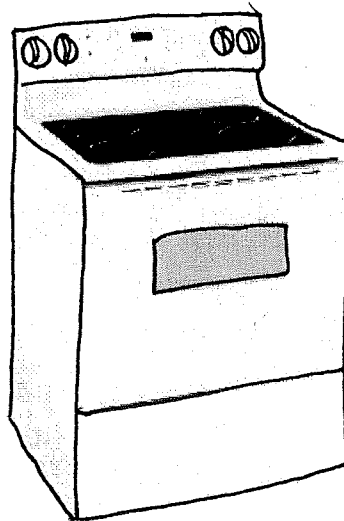
### **Americana 30 Freestanding Electric Stove:**

- Remarkably large oven interior is ideal for holidays, dinner parties and everyday family cooking
- Raised edges and porcelain-enameled surface makes cleaning incredible easy
- Two oven racks - includes two oven rack that are sturdy and reliable
- Additional storage area is ideal for cookware and kitchen accessories



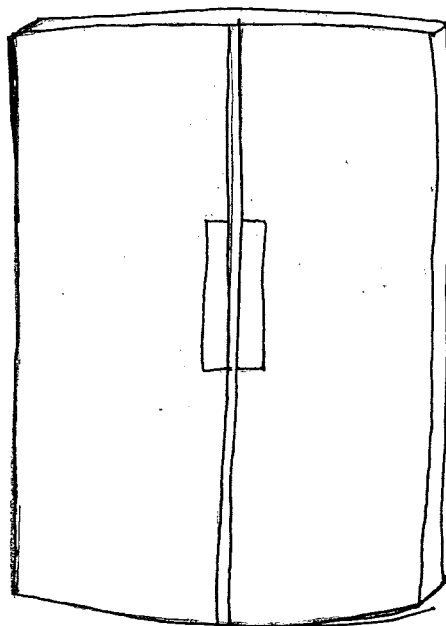
### **GE 30 Freestanding Clean Design Stove**

- Self-cleaning oven conveniently cleans the oven cavity without the need for scrubbing
- Oven controls feature an easy to use design that lets you set precise cooking temperatures
- Ribbon heating elements provide powerful heat beneath a smooth glass surface to ensure even heat and fast warm-up times



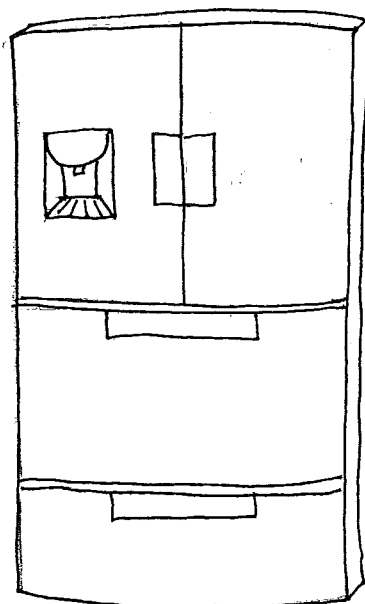
## Amana Fridge

- PUR® water and ice filter
- Deli Drawer
- Gallon Door Storage: Storage bins on the door easily hold gallon-size beverage containers
- Slide-Out, Plastic Freezer Basket

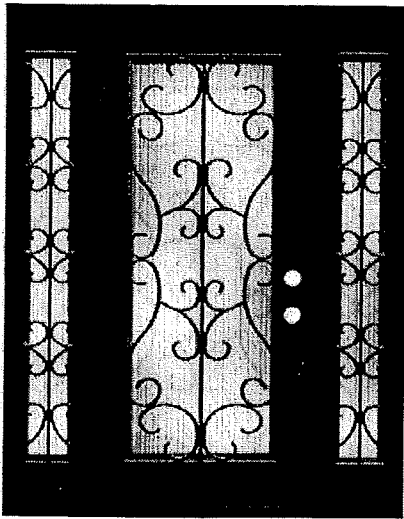


## Maytag French Fridge

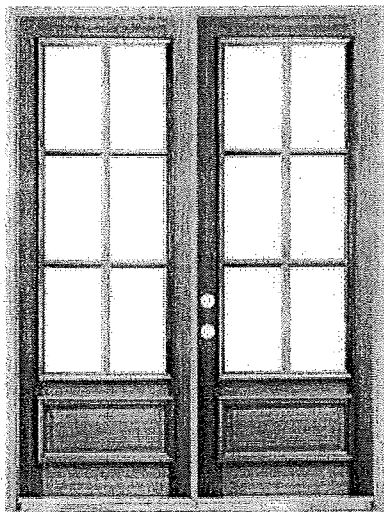
- Glide-Out Freezer Drawer: this dependable drawer design makes storing and accessing food easy. It opens and closes effortlessly, holding up to 120 pounds of frozen food
- Adjustable Glass Shelves
- Covered Dairy Compartment



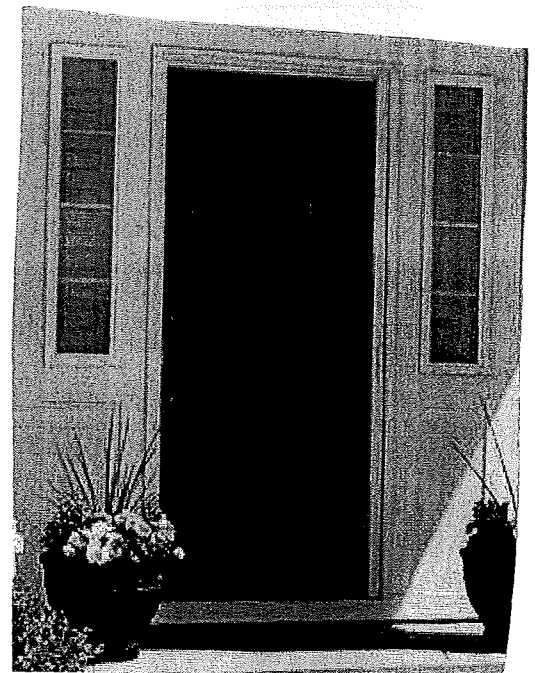
Legacy Front Door



Maple Front Door



Clancy Front Door



Fixture Name	Price of Fixture	X	Quantity	Cost
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		
		X		

Total Cost of All Fixtures:\_\_\_\_\_

## Budget Worksheet 4

You can't spend money without checking your budget! Remember, you only have \$100,000 to spend on your entire house. Now that you've selected fixtures for the rooms, find out how much money you have left to spend!

Money I Have Left to Spend from Budget Sheet 3:
Total Cost of All Fixtures:
Money I Have Left to Spend: