

Home Improvement Project

This project is designed to put together geometry skills to plan a home improvement project. Follow the directions carefully, complete all requirements, and ask for assistance as you need it. Students may use a calculator but must show all work. **If the work isn't shown, the grade will be reduced significantly.** You will need to use a separate sheet to show your work.

Task #1

The carpet in several of your rooms is over ten years old and needs to be replaced. The dimensions for each room are shown below. You must determine the area of all of the rooms, how much carpet you will need for all of the rooms together, what the cost will be for each contractor, and which contractor is the best bargain.

Rooms:	Carpet Suppliers:
Family Room 25' 6" wide and 14' long	Home Depot \$2.75 per square foot installed
Living Room 14' wide and 12' long	Lowe's \$8.00 per square yard installed
Master Bedroom 16' wide and 12' 6" long	
Guest Bedroom 12' 6" wide and 11' long	

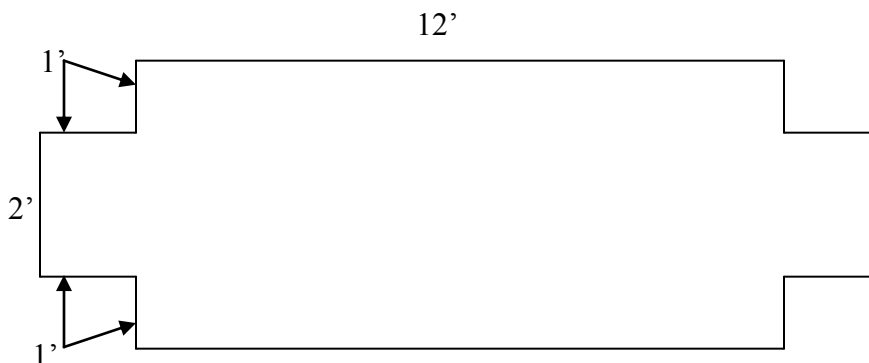
Task #2

You want to replace your old vinyl floor tile in the foyer and kitchen with ceramic tile. The outline of both floors is shown below. You must first determine the total area, how many ceramic tiles you'll need to cover both floors, and finally the total cost of the installation. You MUST add an additional 10% to the area to compensate for the tile cutting.

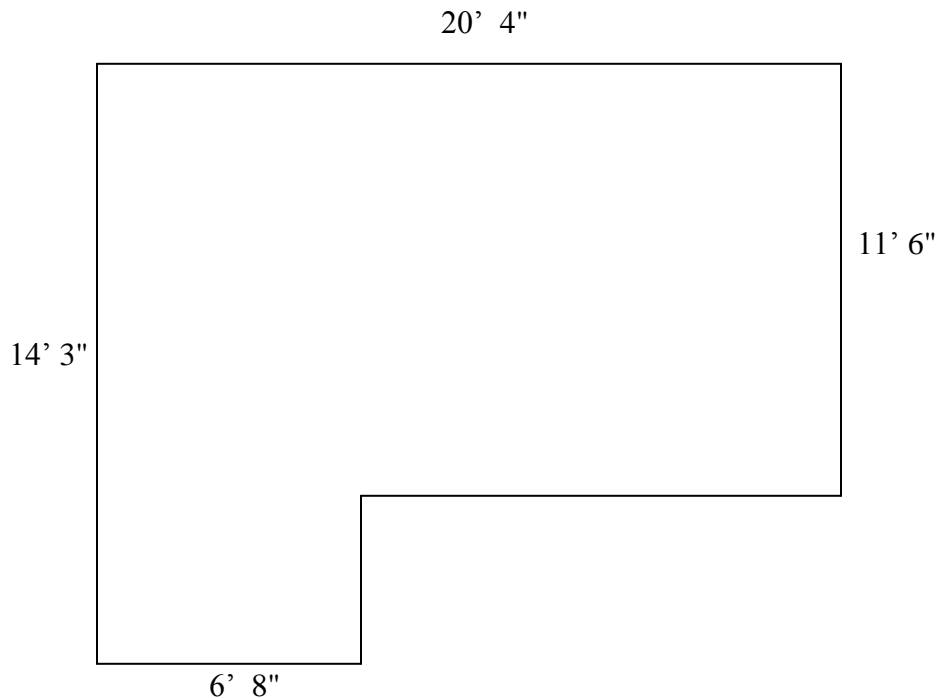
Tile:
Home Depot \$4.85 per square foot installed

Each tile is 12" wide by 12" long

Layout of foyer to be retiled: (picture is NOT drawn to scale)



Layout of kitchen to be retiled:



Task #3

The exterior walls of your house need to be repainted. The dimensions of each wall are shown below. Determine how much paint you will need and how much the paint will cost. Since this is an exterior wall you will be painting two coats. Make sure your calculations reflect this. I STRONGLY encourage you to draw a picture or diagram to calculate the area of each wall.

Front Wall

32' wide and 12' high
4 windows, each 3' wide and 6' high

Left Side Wall

28' wide and 12' high
2 windows, each 3' wide and 4' high

Right Side Wall

28' wide and 12' high
2 windows, each 3' wide and 4' high

Rear Wall

32' wide and 12' high
4 windows, each 3' wide and 5' high

Paint:

Home Depot \$24.95 per gallon

Each gallon will cover approximately 500 square feet