Grade 6

Geometry Project: Area of a Square, Rectangle, Triangle, and Circle

You have been selected to be apart of a home remodel project. You are the head architect, which means you are not only in charge of the project design but also the cost. You will be working on a project for a couple that has a $15,000 budget. As you follow the directions and plan the remodel, make sure you do not go over that budget.

Keep in mind the following parameters:

* $15,000 budget
* The cost for each item will vary
* All work must be done in pencil
* You must fill out the chart as proof you are accounting for budget
* Each room must have the indicated flooring.

Directions:

1. You have the following room dimensions to consider:
   1. Bathroom= 57 square feet (tile only)
   2. Living Room= 35 square feet x 50 square feet (hardwood or carpet)
   3. Bedroom 1= 30 square feet x 19 square feet (hardwood or carpet)
   4. Bedroom 2= 40 square feet x 62 square feet (hardwood or carpet)
   5. Kitchen= 30 square feet x 25 square feet (hardwood or tile)
   6. Dining Room= 45 square feet x 25 square feet (hardwood only)
2. Find the total amount of square feet per room
   1. Write in the total square feet to your chart. Make sure to label your chart accurately.
3. After, you will visit the following website to find the total amount of flooring needed for each room. In other words, the total square footage. You will only purchase flooring PER SQUARE FEET, not the ones with a ‘set’ price.
   1. Website: [www.homedepot.com](http://www.homedepot.com) , click on “flooring” and select either carpet or hardwood
   2. Multiply your area (step 2) by the cost per square inch. This will give you the total cost for the flooring.
   3. Repeat this step (#3) for all the rooms
   4. Add up the cost for all the flooring combined. Make sure it is under budget.
      1. If there is extra budget leftover, you can add in a carpet for specific rooms.
4. Once you finish the outside, you need to landscape two spots in the yard:
   1. Grass in the whole front, except for the birdfeeder.
      1. Grass dimensions: 15 square feet x 15 square feet.
      2. Bird bath: no larger than 20 inch diameter (width)
5. Buy some grass and a bird bath
   1. You will purchase grass from [www.homedepot.com](http://www.homedepot.com) . Search for “sod” in the search bar. You will purchase a bird bath from the same site. Search “bird bath” in the search bar.
   2. Calculate the cost for these items. Keep in mind the birdfeeder will be on part of the grass. You will need to subtract the total area of the grass with the total area of the birdfeeder.
6. Submit your proposal of cost no later than June 1st.

Rubric:

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|  | 3 | 2 | 1 |
| Computations- sq.ft area | All computations are accurate, attached. | Most computations are accurate, attached. | Most computations are inaccurate; missing. |
| Computations- cost total | All computations are accurate, attached. | Most computations are accurate, attached. | Most computations are inaccurate; missing. |
| Computations- cost remaining | All computations are accurate, attached. | Most computations are accurate, attached. | Most computations are inaccurate; missing. |
| Computations-outside | All computations are accurate, attached. | Most computations are accurate, attached. | Most computations are inaccurate; missing. |
| Completeness | All work is completed on time. | Most work is completed on time. | Work is late; missing. |