

Activity 1.7 Bedroom Floor Plan Homework

Part 1: Due: Friday, April 6th

On a piece of paper, use a straight edge or ruler to neatly sketch a map of your bedroom walls, closets, windows, doors, and outlets. Place an X on the wall to show the placement of the outlets. Show all dimensions, including width of the windows and doors, distance between windows and walls, and distance between doors and walls.

1. What is the overall length of your room? _____
2. What is the overall width of your room? _____
3. What is the overall height of the walls in your room? _____



This information is very important. You will need it to create your room in Google Sketch-up Free.

Part 2: Due: Optional (I have provided a link for you to print out an Architectural Ruler to use for this and additional assignments)

Convert your bedroom sketch onto a piece of graph paper. Use the architectural scale to accurately and neatly draw the walls, windows, closets, outlets, and doors (show the door swing) at a scale of $\frac{1}{4}" = 1'$. Remember, walls have a thickness; draw a line parallel to the outside of your wall measurements. Typical wall thickness is 4".

Extra Credit: Draw your bedroom walls and other features again on graph paper. This time use the scale $\frac{1}{2}" = 1'$.

Part 3: Due: Optional

Use a straight edge or ruler to neatly sketch all furniture and/ or appliances in your bedroom on the sketch in your engineering notebook. Label everything.

Part 4: Due: Optional

Use the architectural templates to draw the furniture in your bedroom on to the $\frac{1}{4}"$ scale drawing on graph paper. Neatly label the furniture.

Part 5: Due: Friday, April 6th

Find the link for Google Sketch-Up Free on our classpage. Watch the tutorial that I have linked onto our page, and try the building the practice house. If you do not have access to Revit, PLTW is suggesting you use Sketch-Up.

Conclusion

Answer the questions below. Make sure to show all of your equations and your work.

Questions Be sure to convert your measurements into decimal measurements before performing any calculations.	Your Equation Substitute your results into the equation and write the new equation here.	Your Answer Be sure to label your answer!
1. Calculate your room's floor area. Floor Area = Overall width X overall length		
2. Calculate your room's perimeter. Perimeter = Sum of all the lengths of the walls.		
3. Calculate your room's wall area. Wall Area = Perimeter X wall height		
4. Carpeting costs \$2.00 per square foot. How much would it cost to carpet your bedroom? Total cost = Floor area X cost of the carpet per square foot		
5. Calculate how much paint you would need to paint your bedroom walls. One quart will cover 100 square feet. Remember, you cannot purchase a partial quart! Quarts = Wall area ÷ coverage		
6. Calculate how much paint you would need to paint your bedroom ceiling. One quart will cover 100 square feet. Remember, you cannot purchase a partial quart! Quarts = Ceiling area ÷ coverage		
7. How much floor trim would be needed for your bedroom? Floor trim = Perimeter – sum of the width of all doors		
8. Calculate the cost for putting new floor trim in your bedroom. Floor trim costs \$15.00 for a six foot piece. Floor trim cost = (Floor trim ÷ length of the pieces) X cost per piece		
9. List the electrical appliances you have plugged in most of the time.		