

Applications

A good home must be made, not bought.

Joyce Maynard, American Author

- Interpret the quote in the context of what you think is the difference between a house and a home.
- A rectangular room measures 13 feet by 15 feet. It is going to be carpeted with carpeting that sells for \$68 per square yard.
 - What is the area of the room in square feet?
 - If the room is drawn to $\frac{1}{4}$ inch represents 1 foot scale, give the dimensions of the room in inches on the scale drawing.
 - A yard equals 3 feet. How many square feet are in a square yard?
 - How many square yards will it take to carpet the room? Round up to the next greater integer.
 - What is the total price for the carpeting?
 - In the early mid-2000s, there was a dramatic increase in the price of carpeting, since it was a petroleum-based product. As a result, selling by the yard made it look expensive. Some stores started selling carpet by the square foot. How much would a square yard of carpet selling for \$8.95 per square foot cost?
 - This room is well-insulated and is on the south side of the house. It has an 8-foot-high ceiling. How large an air conditioner would this room require? Round to the nearest thousand BTUs.
- A rectangular room has length L and width W , where L and W are measured in feet.
 - Express the area in square feet algebraically.
 - If carpeting costs x dollars per square yard, express the cost of carpeting this room algebraically.
- A rectangular room is 14 feet by 20 feet. The ceiling is 8 feet high.
 - Find the length and width of the smaller wall.
 - Find the area of the smaller wall.
 - Find the area of the larger wall.
 - Find the total area of the four walls in the room.
 - If a gallon of paint costs \$36.50 and it covers 350 square feet on average, what is the cost of painting the room with two coats of paint? Explain your answer.
 - This room is well-insulated and is on the north side of the house. How large an air conditioner would this room require? Round to the nearest thousand BTUs.
- A gazebo in the shape of a regular octagon has equal sides of 9 feet and an apothem of 10.9 feet.
 - If one side of a gazebo is open, and the other sides have a railing, find the cost of the railing if it sells for \$7.90 per foot.
 - Find the area of the gazebo.
 - Find the cost of the gazebo's floor if the flooring costs \$3 per square foot. Round to the nearest hundred dollars.