



The longest side of the room is $344 + 80 + 82$ inches long. (506 inches)

The shorter side of the room is $24\text{ft} + 40\text{in}$. ($24\text{ft} = 288\text{in}$; $288 + 40 = 328\text{in}$)

The area of the room is length times width, and then you will have to take out the area for the doorways (one is 40×82 and the other is 40×80)

$$\text{Area} = (506\text{in} \times 328\text{in}) - [(40 \times 80) + (40 \times 82)]$$

$$\text{Area} = 165,968 - 6480 = 159,488\text{in}^2$$