

Question: A bathroom has 10 6 inch tiles along its width and 20 6 inch tiles along its length. What is the square footage of the bathroom?

CoT

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iGraph

<p>Step 1: Calculate the total width of the bathroom in inches. We know there are 10 tiles along the width, and each tile is 6 inches. $\text{Width in inches} = \text{Number of tiles} \times \text{Tile length} = 10 \times 6 = 60 \text{ inches}$</p> <p>Step 2: Convert the width from inches to feet. To convert inches to feet, we divide by 12 (since 1 foot = 12 inches). $\text{Width in feet} = 60 \text{ inches} \div 12 = 5 \text{ feet}$</p> <p>Step 3: Calculate the total length of the bathroom in inches. We know there are 20 tiles along the length, and each tile is 6 inches. $\text{Length in inches} = \text{Number of tiles} \times \text{Tile length} = 20 \times 6 = 120 \text{ inches}$</p>	<p>Calculate the total width of the bathroom in inches: number of tiles \times tile length = $10 * 6 = 60 \text{ inches}$</p> <p>Convert the width from inches to feet: width in inches $\div 12 = 60 / 12 = 5 \text{ feet}$</p> <p>Calculate the total length of the bathroom in inches: number of tiles \times tile length = $20 * 6 = 120 \text{ inches}$</p> <p>Convert the length from inches to feet: length in inches $\div 12 = 120 / 12 = 10 \text{ feet}$</p> <p>Calculate the square footage of the bathroom: length \times width = $10 * 5 = 50 \text{ sq feet}$</p>	<p>Python Solution</p> <pre> # Calculate the total width of the bathroom in inches 1 width_inches = 10 * 6 # Convert the width from inches to feet 2 width_feet = width_inches / 12 # Calculate the total length of the bathroom in inches 3 length_inches = 20 * 6 # Convert the length from inches to feet 4 length_feet = length_inches / 12 # Calculate the square footage of the bathroom 5 bathroom_area = length_feet * width_feet </pre>	<pre> graph LR A[Width Tiles 10 tiles] --> C[Tile Size 6 inches] B[Length Tiles 20 tiles] --> C C --> D[Width in Inches 60 inches] C --> E[Length in Inches 120 inches] D --> F[Width in Feet 5 feet] E --> G[Length in Feet 10 feet] F --> H[Bathroom Area 50 sq feet] G --> H </pre>
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