Question statement & Summary

iCoT Explanation Panel

iPoT Explanation Panel

iGraph Explanation Panel

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?

Summary

Width tiles: 10 tiles of 6 inches each
Length tiles: 20 tiles of 6 inches each
Goal:
The square footage of the bathroom.

▶ Play　■ Stop　↗ Previous Step　↘ Next Step

Step-by-Step Explanation

Calculate the total width of the bathroom in inches: number of tiles × tile length = 10 * 6 = 60 inches　**1**

Convert the width from inches to feet: width in inches ÷ 12 = 60 / 12 = 5 feet　**2**

Calculate the total length of the bathroom in inches: number of tiles × tile length = 20 * 6 = 120 inches　**3**

Convert the length from inches to feet: length in inches ÷ 12 = 120 / 12 = 10 feet　**4**

Calculate the square footage of the bathroom: length × width = 10 * 5 = 50 sq feet　**5**

Final Answer: 50

▶ Play　■ Stop　↗ Previous Step　↘ Next Step
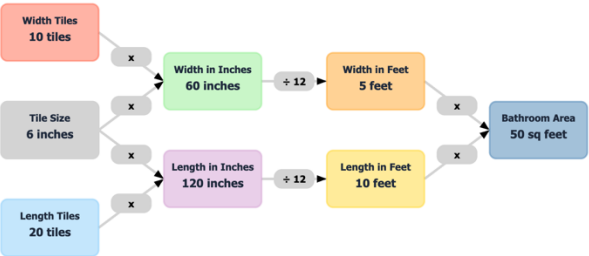
Python Solution

```
    # 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
```

Variables

width_inches	60 inches
width_feet	5 feet
length_inches	120 inches
length_feet	10 feet
bathroom_area	50 sq feet

Play　■ Stop　↗ Previous Step　↘ Next Step

Width Tiles 10 tiles · Tile Size 6 inches · Length Tiles 20 tiles · Width in Inches 60 inches · Length in Inches 120 inches · Width in Feet 5 feet · Length in Feet 10 feet · Bathroom Area 50 sq feet

Calculate the square footage of the bathroom
Calculation: length × width = 10 * 5 = 50 sq feet　**5**

Final Answer: The bathroom is 50 square feet.