Problem Statement:

> 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?

Step By Step Explanation:

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.

Width in inches = Number of tiles × Tile length = 10 × 6 = 60 inches

Step 2: Convert the width from inches to feet.

To convert inches to feet, we divide by 12 (since 1 foot = 12 inches).

Width in feet = 60 inches ÷ 12 = 5 feet

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.

Length in inches = Number of tiles × Tile length = 20 × 6 = 120 inches

Step 4: Convert the length from inches to feet.

To convert inches to feet, we divide by 12.

Length in feet = 120 inches ÷ 12 = 10 feet

Step 5: Calculate the square footage of the bathroom.

The area is calculated by multiplying the length by the width.