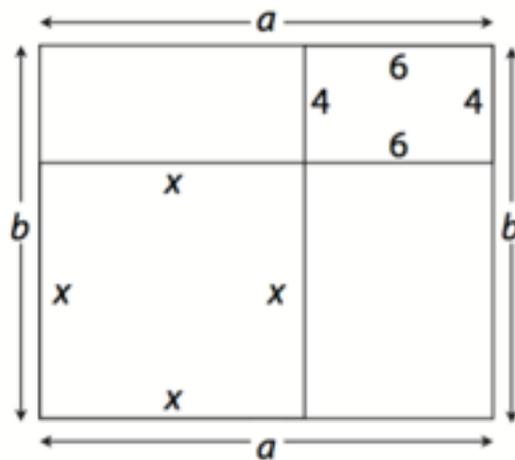Soren has been hired to design a small cabin. He has drawn the blueprint below. His client is still determining the overall size of the cabin, but Soren has labeled the known lengths in feet. He wants to find an expression to represent the perimeter of the entire space. The perimeter of the cabin is the sum of all four sides and can be written as perimeter $= 2a + 2b$. Find an expression in terms of x that shows the total perimeter.

1. What does a equal in terms of x?

2. What does b equal in terms of x?

3. Using the formula for perimeter and expressions for a and b,write a formula for the cabin's perimeter in terms of x.

4. What is the simplified perimeter of the cabin in terms of x?