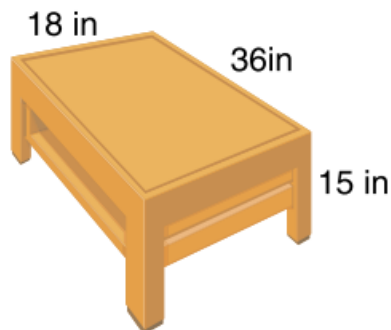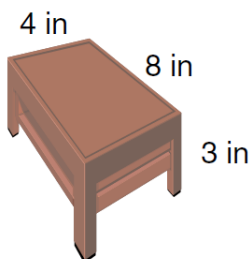## Basic Problems

1. Raymarko is building doll furniture for his sister's dollhouse.
   He measures the coffee table in his house, and draws the following picture.

Would it be possible for him to build a similar coffee table that measures 4 inches wide by 8 inches long by 3 inches high?

Step 1: Draw and label a diagram.

Step 2: Determine whether the tables are similar by comparing corresponding side length ratios.

Relative Position	Side length ratio original:doll furniture
length	$\dfrac{36}{8} = 4.5$
width	$\dfrac{18}{4} = 4.5$
height	$\dfrac{15}{3} = 5$

The corresponding side length ratios are not exactly the same. As such, the table cannot be reduced to the new dimensions without altering the relative height of the table.