Measuring Up

Level E

Arturo, Brennan, and Cameron each had broken measuring sticks. Each stick was marked with equally spaced units, but the units were not necessarily the same size from one stick to another.

The first number appearing on Arturo's stick was 13.

Brennan's stick started with 32.

The first number on Cameron's stick was 27.

They all held their sticks up next to the same chair and looked at the top number on the stick that correlated with the top of the chair. Arturo's stick read 93, Brennan's stick read 92, and Cameron's stick read 147.

Brennan measured the height of Cameron's stick using his stick in the same manner as he had the chair. It read 155. What reading did Arturo's measuring stick give for the height of Cameron's stick?

Determine a method for converting between the three different measuring sticks. If you measured something using Cameron's stick, what reading would you have on Arturo's and Brennan's sticks, and vice versa? Explain your solutions.