

Advanced Challenge Level 1 Problem #66

Solve the following problem.

Sue and her brother Al decided to invent their own unit for measuring length. Of course Sue called hers a sue, and Al called his an al. Now it turns out that 1 sue is exactly equal to 2.5 als. Sue's mom was going to have some carpeting installed on the floor of their living room. Sue measured the length of the room and came up with 16 sues. She measured the width and got 10 sues. The total cost of the carpeting turned out to be \$400. Now Al's bedroom needed some carpeting as well. Al's room is 20 als long and 15 als wide. If the cost of the carpeting is the same per square unit, then what will the total cost of the carpeting for Al's room be?

It's very important that you write out the process you use to solve it, including a diagram and any mathematical relationships needed. Good luck.