

Problem 3: How to Tile?

A 23×23 square is to be completely tiled by 1×1 , 2×2 , and 3×3 tiles. What is the minimum number of 1×1 tiles needed?

As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

Posting Date 2/2/2024. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 by e-mail or hard-copy by noon on Friday, February 16, 2024. An email submission must be a single pdf file. Hard copy submissions must be dropped in the file holder at my office door (Hayes 319) and must include a time stamp.