

MAT310 Project 2: Paints.

Due December 15, 2004

This project consists of one nonstandard problem on linear algebra. To solve it, you do not probably need to know anything except for Chapters 1 and 2 of the textbook, but you need to think a lot and to be inventive. Good luck!

The painter problem. A house painter has 7 cans with 7 different paints, but does not have any spare cans. Each can is $\frac{9}{10}$ full. The only way to mix paints is to pour some amount of paint from one can to another and stir thoroughly. The painter wants to prepare a blend containing equal amounts of all 7 paints. Is it possible?