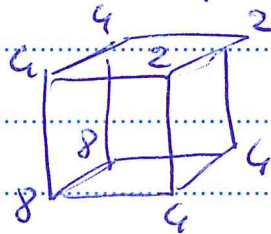


1) Find a decomposition of



2) Prove that

$$V_1 \otimes W_1 \otimes U_1 = V_2 \otimes W_2 \otimes U_2$$

iff $\exists \alpha_1, \alpha_2, \alpha_3 \in \mathbb{R}$ with $V_2 = \alpha_1 V_1$, $W_2 = \alpha_2 W_1$, $U_2 = \alpha_3 U_1$
and $\alpha_1 \alpha_2 \alpha_3 = 1$

3) (Discussion)

In a casino the croupier has 2 pairs of coins. The pair 1 is perfectly unloaded. Coins in pair 2 are unloaded by they are magnetic and when the 1st coin of the second pair gives H there is a high probability that also the second coin gives H.

Find a parametric representation of what happens if the chief of the casino tosses a loaded coin to decide which pair of coins is used in any launch.