Question 1:
No Arbitrage

The Fundamental principle in Derivate Pricing is the concept of No-Arbitrage. An arbitrage opportunity is one where there is an opportunity for risk free profit.

Consider the following example:

Let's say you are given currency exchange rates
USD/INR = 75; this means you can convert 1$ for 75₹
INR/EUR = 0.02; this means you can convert 1₹ for 0.02€
EUR/USD = 1.2; this means you can convert 1€ for 1.2$

Now if you started with 1USD you could get 75INR, which you could then convert to 1.5EUR which can then be converted 1.8USD. So effectively you just made 0.8 USD for free!

Given a table of prices of multiple currencies return whether arbitrage is possible or not;
Where, table[i][j] means 1 unit of the ith currency = table[i][j] units of jth currency

	USD (j=0)	INR (j=1)	EUR (j=2)
USD (i=0)	1.0	75	0.833
INR (i=1)	0.013	1.0	0.02
EUR (i=2)	1.2	50	1.0

Please round all values to 3 decimal places

Input Specification:

Prices given in the variable named **matrix**

Output Specification:

Return the Boolean string whether Arbitrage exists or not i.e. "TRUE" or "FALSE".